PIOTR N. KOTOWICZ*, PAWEŁ SKOWROŃSKI**

NEW RULERS, NEW RULES? CHANGES IN MILITARY EQUIPMENT DURING THE 13TH AND 14TH CENTURIES IN THE AREA OF THE SANOK LAND

Abstract: This paper discusses problems of changes in military equipment that was in use in the historical Sanok Land. Being situated in the borderland of Piast Poland and the Halych-Volhynia Principality, Sanok was located at the interface of two civilisations – Latin and Byzantine. This was naturally reflected in both the material and spiritual culture of this region which was incorporated into Kievan Rus’ in the 11th century and then became part of the Kingdom of Poland (Red Ruthenia) after 1340. A question asked by the authors is: did the change of state sovereignty in the mid-14th century and the appearance of colonists from the West result in popularisation of the ‘Latin’ model of weaponry or were medieval Rus’-style arms and armour still in use? On the basis of a confrontation of written, iconographic and archaeological sources which concern this region in the period between the 1st half of the 13th and the late 14th century the authors draw the conclusion that after the year 1340 some types which are characteristic for the Eastern European model of weaponry were replaced to a considerable degree by weapons evolving in the Latin sphere.

Keywords: Halych-Volhynia Principality, Red Ruthenia, Sanok Land, 13th-14th century, weaponry

Received: 16.06.2020 Revised: 06.07.2020 Accepted: 31.07.2020

Citation: Kotowicz P. N., Skowroński P. 2020. New Rulers, New Rules? Changes in Military Equipment during the 13th and 14th Centuries in the Area of the Sanok Land. “Fasciculi Archaeologiae Historicae” 33, 49-69, DOI 10.23858/FAH33.2020.004

In early Spring 1340 Jurij Bolesław II Trojdenovych the last ruler of Halych-Volhynia Principality died of poisoning. This fact was of tremendous significance for the further history of this West Ruthenian Duchy. Due to succession pacts, claims to his territory were raised on the one hand by Casimir the Great, King of Poland (supported by Hungary) and on the other, by the Lithuanian Duke Liubartas. This conflict was resolved by force of arms over the next dozen or so years and it ended with a division of the former Halych-Volhynia Duchy. Its northern and eastern parts (Volhynia and Podolia) remained under the rule of Lithuania while the Kingdom of Poland gained control of its former Halych part.1 Lands conquered by Poland which later formed so-called Red Ruthenia became divided into four new land districts – Sanok, Przemyśl, Lviv and Halych (Fig. 1). Intensive colonisation and town-building which commenced as early as the 13th century continued apace.2 A new administrative structure was built and apart from traditional Orthodox culture, strong influences of the Latin civilisation became established.3

Did these changes take place in all aspects of life of the inhabitants of Crown Ruthenia in this period? It is difficult to respond unambiguously to this question without comprehensive studies. We will concentrate on one such aspect, namely, the problem of possible

---

1 Historical Museum in Sanok; https://0000-0002-9091-2470; p_kotowicz@o2.pl
2 Janeczek 2011; Sperka 2012, 103-155. They were joined to Poland again during a bloodless expedition in 1387 by Queen Jadwiga of Anjou.
3 Wünsch and Janeczek 2004. See also Horn 1974; Janeczek 1978; Fastnacht 2007; Janeczek 2011; Szyszka 2016, 27-28.
changes in the weaponry of warriors who constituted the armed forces of these lands. We are interested as to whether the change of state sovereignty and the appearance of colonists from the West resulted in the popularisation of the “Latin” model of weaponry. Or, perhaps did this model significantly influence weaponry of Ruthenian warriors earlier, in the last stage of the existence of the Duchy of Halych-Volhynia? Another significant question concerns the long life of weaponry which was characteristic of medieval Rus’ in the 2nd half of the 14th century in this region. Our discussion will be based on a confrontation of written, iconographic and archaeological sources concerning on the one hand the armament of warriors in the Halych-Volhynia Principality in the 13th and in the 1st half of the 14th century, and on the other hand a similar assemblage related to Red Ruthenia in the 2nd half of the 14th century.

Due to the broad scope of these problems, we have decided to test these research issues on a source assemblage related to the smallest territorial unit of Crown Ruthenia, that is, the Sanok Land, which was the south-westernmost part of the former Halych-Volhynia Duchy. Sanok (Podkarpackie Voivodeship, Poland) was one of the more important Rus’ strongholds in the Early Middle Ages. It was situated directly near the border with Poland and Hungary and it was one of the first centres of Halych-Volhynia to be granted Magdeburg law in 1339. What is more, its significant role was maintained after 1340, when the aforementioned Sanok Land was formed around it. Of enormous significance also is the relatively good archaeological reconnaissance of more important centres of power which were situated in this area. Examinations which have been held for many years in these centres have yielded, among other things, a numerous assemblage of finds of weaponry related both to the Old Rus’-, and the Post-Mongol Period, as well as – to a smaller degree –

4 Ginalski 2016; Ginalski and Kotowicz 2019.
5 Kiryk 1995.
6 Jędrzejowicz 1939; Kotowicz 2002, passim; Ginalski and Kotowicz 2004; Kotowicz 2005; Kotowicz 2006, 26-37; Fedyk and Kotowicz 2006, Figs. 5-7, 10:1-2 and 13:3-4; Gliniawicz and Kotowicz 2008; Kotowicz 2013a; Kotowicz 2016, Figs. 4 and 5; Kotowicz 2017, Figs. 7, 9 and 11.
to the 14th century period of Polish and Hungarian rule. Of no less significance is the existence of a relatively opulent assemblage of written sources concerning the history of this region in the 2nd half of the 14th century. Among these, of greatest importance are grants related to knighthly law, issued by Polish and Hungarian rulers and by governors of Ruthenian lands. In these grants, in exchange for donations of lands and privileges the sovereign specified, among other things, the military duties of the recipient. These duties encompassed participation in military expeditions by royal command, and determined whether a given warrior should come as a lancer or a shooter. They usually also specified the size of the retinue and sometimes precisely enumerated offensive arms and protective equipment which was to be possessed by the warrior and his followers. Sparse iconographic sources related to Halych-Volynia or to Red Ruthenia will play an auxiliary role in our discussion.

It is difficult to determine unequivocally what the weaponry of warriors of Halych-Volynia looked like in the Pre- and Post-Mongol Period. Despite many years of archaeological excavations and the acquisition of an enormous assemblage of finds related to this problem, no monographic work on this issue has been published so far. This role is regrettably not fulfilled by a short study on this issue by V. Petehrych. The monograph of weaponry in early medieval Lesser Poland by P. Strzyż solely discusses the western borders of this duchy. However, there are many detailed studies (whose value varies with regard to source criticism) discussing individual categories of weaponry, assemblages of finds from examined sites (chiefly strongholds), as well as individual discoveries of arms and armour. We do not have a generalised work on the weaponry of Halych-Volynian warriors in the light of written sources and iconography, either. This role is certainly not fulfilled by an otherwise valuable study by M. F. Kotliar, in which the author paid a lot of attention to Halych and Volynia matters. However, there are a few smaller works concerning military affairs in the times of King Danylo of Halych and his successors.

It seems, however, that an overview of available data allows for one general observation. Arms and armour which were in use in the discussed region in the period from the 12th to the 1st half of the 14th century represent a model of military equipment which is typical of all Ruthenian duchies. It originated first of all from the local heritage of Kievan Rus’. This mode was enriched with inspirations from territories of the Latin world and from nomadic peoples inhabiting the Black Sea coastal steppes, from Byzantium and Balt peoples. Such a status quo is chiefly remarkable for the 12th and the 1st half of the 13th century. As it is assumed in literature, the period of Mongol invasions proved to be a turning point, as it caused significant changes in military affairs in the realm of Danylo of Halych. This applied both to tactics and structure of the army (an increase in infantry’s importance, the growing role of archers and crossbowmen), but also in its equipment (popularisation of siege engines) and weaponry (especially protective armament) of individual combatants.

The latter aspect is first of all related to a need of dealing with a new powerful adversary, that is, the Tatars.

Archaeological finds of weaponry dated to the 12th and the 1st half of the 13th century from the territory of Halych-Volynia demonstrate – as has been mentioned – a model of military equipment that is convergent with other Ruthenian duchies. In the light of these discoveries the defensive armament of warriors comprised first of all conical helmets of various types and mail armour. Furthermore, iconography (mainly seals) evidences the use of almond-shaped shields. Concerning offensive arms, apart from swords, spears, axes, and lances...
and sporadically used sabres,\textsuperscript{23} these comprised maces and flails.\textsuperscript{24} Sabres, maces and flails were weapons that were borrowed from the nomadic milieu. Arrowheads with tangs and leaves of various shapes\textsuperscript{25} were in common use. Such arrowheads were almost completely unknown to western neighbours, where artefacts with sockets were used.\textsuperscript{26} Equestrian equipment – spurs, stirrups – was quite close to that used by the Latins.\textsuperscript{27} What was an exception were horsewhips, which became widespread due to nomadic influence. They ended with terminals in the shape of stylised animal heads.\textsuperscript{28} Yet another category of equipment of nomadic provenance were bits with cheek-pieces.\textsuperscript{29}

The existence of such a model is also confirmed by finds from the Upper San Basin. We do not know much about the protective armament of the inhabitants.

\begin{enumerate}
\item See Ters’kyi 2006, Fig. 5:16. The sabre appears only once in the Halych-Volhynian Chronicle – it was part of parade Oriental equipment of King Danylo of Halykh at the moment of his arrival in Bratislava in the mid-13\textsuperscript{th} century – \textit{Ypat’evskaia...}, col. 814; \textit{Kronika halicko-wołyńska...}, 184; cf. Hutsul 2009, 88.
\item Cf. Świętosławski 2006, 66, 79.
\item Cf. Hilczerówna 1956; Świętosławski 1990; Ters’kyi 2015.
\item Kotowicz 2006, 34-35, Fig. 7:1-2; Petehyrych 2010, 254-256, Photos 1-2.
\end{enumerate}

\textsuperscript{23} Cf., e.g. Tereszczuk 2003.
of these lands; however, finds from the ‘Horodyszcze’ stronghold in Trepcza (Sanok District, Podkarpackie Voivodeship) which is identified with Sanok mentioned in early-medieval written sources allow us to assume that mail armour was in use there. Edged weapons are represented now by two swords discovered in Wisłok Wielki (Sanok District, Podkarpackie Voivodeship; 12th-early 13th century) and in Krosno (Podkarpackie Voivodeship; 1st half of the 13th century) – the latter find clearly demonstrates Eastern European traits – as well as by a sword cross-guard from the castle hill in Sanok (12th-early 14th century) (Fig. 2:1-3). Typical Old Rus’ weaponry is represented also by maces, whose material remains are usually their metal heads. What stands out among them is a parade artefact that was made from bronze. It was discovered in the village of Niebieszczański (Sanok District, Podkarpackie Voivodeship; 12th-13th century) (Fig. 2: 10). The remaining two finds are more common and were manufactured from lead. They were discovered in 12th-early 14th century cultural layers on the castle hill in Sanok (Fig. 2:11-12). However, fragments of two bronze flails dated to the 12th-1st half of the 13th century, including an artefact with zoomorphic ornament (Fig. 2:13) were discovered in the ‘Horodyszcze’ stronghold. The eastern European model of shooters’ equipment is represented by arrowheads which are commonly found in the vicinity of Sanok.

30 Ginalska and Kotowicz 2004, 202-204, Tab. II:1-2.
31 Kotowicz and Muzyczuk 2008, 128-131, Figs. 2-3; Kotowicz, forthcoming a.

32 On the subject of this type maces cf. e.g. Strzyż 2005.
33 Ginalska and Kotowicz 2004, 197-199, Tab. II:1-2.
These are mainly artefacts with tangs (Fig. 2:5-6), although examples with sockets and barbs are also encountered (Fig. 2:4). A universal model is represented by parts of equestrian equipment – chiefly spurs with goads and rowels which are first of all known from ‘Horodyszcze’ in Trepcza and from the “castle hill” in Sanok (Fig. 3).

As mentioned above, it is suggested in literature that the Mongol invasion in the late 1230s strongly influenced the military reorganisation of the Halych-Volhynian Duchy. It was also manifested by changes in individual weaponry. Such conclusions can be drawn first of all on the basis of two mentions in the Halych-Volhynian Chronicle. The first one concerns a meeting of Danylo Romanovych with the Hungarian King Bela IV and German envoys of Emperor Frederick II which took place in Bratislava in the mid-13th century. The chronicler vividly depicts the admiration of Germans at seeing the duke sitting in a saddle that was lavishly ornamented with gold, with a skilfully decorated sabre and arrows (or rather a bowcase). What provoked even more surprise, however, were ducal warriors equipped with armour made from small plates which shone in the sun. They rode horses which

---

34 Ginalska and Kotowicz 2004, 212-214, Tab. VI:9-10, VII:3,5-10.
35 Ginalska nad Kotowicz 2004, 223-226, Tab. XII:1,3-6, XIII:1-3; Ginalska and Kotowicz 2019, Fig. 9:8-11.
36 Kirpichnikov 1976, 7-8; Voĭtovych 2006, 90-91.
were covered with leather armour, according to Tatar fashion. This armour protected both the torsos and the heads of the animals. The other mention was recorded in the necrology and laudation of Duke Volodymyr Ivan Vasylkovych, written in 1287. It specifies ‘bron doshchatyye’ (‘бронѣ дощатые’) – armour made from plates, for which (as well as for 50 marks of marten skins and for five bales of bright red silk) the duke bought the village of Berezovychy in Volhynia from a boyar named Fedorko. According to A. N. Kirpichnikov, these mentions and the appearance of the term ‘dospekh’ (‘доспех’) with reference to “armour”, instead of the word ‘bronya’ (‘броня’) that had been used so far, demonstrated a certain orientalisation of Halych cavalry which took place under Tatar influence. This change consisted in a broad-scale introduction of scale and lamellar armour instead of mail armour that was in use previously. Leather armour was also used for protecting horses. The use of platelet armour (lamellar and scale) in the last stage of the existence of Halych-Volhynian Ruthenia is demonstrated by finds of more than 60 platelets (mainly D-shaped) that were discovered in the course of research on the ‘Zamczysko’ stronghold in Sanok-Biała Góra (Fig. 4:5-20). This small stronghold is dated to the 2nd half of the 13th and

---

37 Ypat'evskaia..., col. 814; Kronika halicko-wołyńska..., 183-184; Kirpichnikov 1971, 18; Kiiko 2006, 95.
38 Ypat'evskaia..., col. 904; Kronika halicko-wołyńska..., 247; Medvedev 1959a, 119-120; Medvedev 1959b, 175; Kirpichnikov 1971, 15.
39 Kirpichnikov 1976, 8.
40 Kotowicz, forthcoming b.
the 1st half of the 14th century and it was destroyed as a result of an unexpected invasion. This is evidenced by fire traces recorded in its cultural layers, by finds deposited shallowly in the soil and by arrow- and bolt heads (nearly 200 finds in total) discovered in the courtyard and the nearby area. An analysis of the political situation in the region and of the acquired archaeological finds implies that this premise was destroyed in the course of expeditions led by the Polish king, Casimir the Great after the death of Jurij Boleslaw Trojanowychny in the early 1340s.\footnote{Fedyk and Kotowicz 2006; Kotowicz 2017.}

The use of these elements of armament was supposed to protect Ruthenian warriors against the danger posed by Mongol archers.\footnote{Kirpichnikov 1976, 8, 33.} Another response to the Tatar way of waging war was an increase in the importance and numbers of archer detachments. They were chiefly equipped with bows mainly launching projectiles with traditional arrowheads with tangs. Such arrowheads were practically unknown in the neighbouring territory of Lesser Poland in this period.\footnote{Individual finds of these are dated to the period around and after 1250, and were discovered in remains of defensive features (strongholds, castles). They are usually interpreted as traces of presence of Tatar-Ruthenian detachments – Świętosławski 1998, 172; Bodnar et al. 2006; Florek 2015a; Florek 2015b; Liwoch 2016, 100, Fig. 5.} A considerable number of such arrowheads – 47 finds – was discovered in the course of the examinations of the aforementioned ‘Zamczysko’ stronghold in Sanok-Biała Góra.\footnote{Kotowicz 2017, 41, Fig. 9:9-15.}

Such an image of weaponry with clearly Eastern European traits could also be confirmed by sparse iconographic sources which are believed to be related to Halych-Volhynia. These first of all include a 14th century icon\footnote{The icon underwent radiocarbon dating which demonstrated that the boards it was made from should be dated to the 1st half of the 14th century, Helytovych 2014, 10.} with a depiction of Saint George from the Orthodox church of Saint Joachim and Saint Anne in the village of Stanylia (L‘iviv obl., Ukraine) (Fig. 4:1).\footnote{Cf. Helytovych 2014, cat. no. 6, Fig. 6. While analysing this icon, N. Kolpakova states that in the manner of depiction of the saint there are solutions which were already characteristic for the period of the Palaeologus dynasty. These, however, focus more on an “ascetic” manner of depicting the legend of this saint than on parts of his military dress, Kolpakova 2014, 24.} This icon depicts the holy warrior on a black horse, armed with a spear and wearing brown, that is, in all probability leather scale armour. The armour is depicted in a Byzantine fashion, with an officer’s belt across the chest of the horseman. However, it is uncertain whether such a depiction of the saint is not to some degree a result of a particular convention or a pattern-like depiction of such persons, which was based on a tradition that may have been a few centuries old.\footnote{Kolpakova 2014, 24.} It is worth noting that in this case Saint George was depicted with contemporised elements of equestrian equipment – a stirrup and a spur.

Other iconographic sources also seem to suggest that during the first decades of the 14th century the weapons of warriors in Halych-Volhynia differed from those used by their Latin neighbours. We have a depiction of a horseman equipped with a conical helmet from an equestrian seal of King Jurij I Lvovych of Halych-Volhynia. It was appended to a charter issued by his sons Dukes Lev and Andrey in 1316 (Fig. 4:2).\footnote{Lewicki 1898, 175; Lappo-Danilevskii 1907, Tab. I. A nearly identical seal (with a minor difference in the title) was also used by this ruler’s grandson Duke Jurij II Boleslaw Trojanowychny for his charters – Lappo-Danilevskii 1907, Tab. IV-VI; Tęgowski 2010, 318.} This helmet type\footnote{Similar helmets are known from the Simonov Psalter which is dated to the late 13th century and is thus chronologically close to the depiction in question. Another example is a border scene of a ‘Saint George’ icon from the early 14th century – cf. Kirpichnikov 1971, Tab. VI, XIII, XIV:1; Kirpichnikov 1976, Tab. XIII:1-2,4. A crest of this kind of helmets, made from a metal sheet that was rolled up into a socket was discovered in the course of the research on the aforementioned ‘Zamczysko’ stronghold in Sanok-Biała Góra (Fig. 4:4) – cf. Kotowicz 2017, Fig. 11:23.} can also be found on seals of similar chronology that were used by Mazovian dukes.\footnote{Kuczyński 1978, 298-305, 308-313, cat. nos. 16-17, 20, 22.} However, it is much less common on seals from Lesser Poland,\footnote{Kajzer 1976, 60-61, cat. no. 12.} where pot helmets prevail.\footnote{Kajzer 1976, 61.} However, the person on horseback holds a triangular shield, which is of Western origin,\footnote{Krotowski 2011, 286. In its classic form it appears in Byzantine culture in the early 13th century – cf. Krotowski 2011, 287, Fig. 68.} but in Ruthenian iconography (seals) can be found as early as the 2nd quarter of the 13th century.\footnote{Kirpichnikov 1971, 45, Fig. 16:2-3.} Therefore, in the period in question it was perhaps well-established in this region. Of utmost interest is another seal with a depiction of a warrior. It is usually related to Duke Lev Danylovych (Fig. 4:3)\footnote{Hrechylo 2000, 257.} and is appended to the aforementioned charter from 1316. It depicts a knight on foot, dressed in mail and holding a spear in his left hand. His right hand rests on a rectangular shield with a well-pronounced rib – a so-called pavise.\footnote{Lappo-Danilevskii 1907, Tab. I. An erroneous interpretation of another worse preserved impression of this seal was offered by Lewicki 1898, 172.} This depiction has not been mentioned so far in arms and armour studies and it seems to be the earliest.
certain image of a pavise in Ruthenian iconography. Its earliest depictions in the territory of northern Ruthenia are first known from the seal of Ivan Ivanovich from the years 1354-1359. We agree with the opinion of A. Nowakowski that a 12th-century bone badge with an image of an armed centaur that was believed by A. N. Kirpichnikov to be a proof for the Ruthenian provenance of such shields in fact depicts an almond-shaped shield, or “pavésky litevské, scutum Pruslicum, lütische schild or clipeus Litwanicus.” In their early form they became popular in the territory of 13th- and 14th-century Mazovia and became part of so-called “Mazovian armour.” Bearing in mind the strong military-political contacts between Halych-Volhynia and Baltic peoples (especially with the Lithuanians and the Yotvingians), and also with the Mazovians, such a borrowing is obviously natural.

Halych-Volhynia, as the westernmost part of Ruthenia, was unquestionably subject to Latin influences. Arms and armour manufactured in the territory of the Latin civilization may have found their way to the Duchy, e.g. as booty or gifts brought from expeditions led by Ruthenian dukes to the Polish or Bohemian lands. In this context it is worth mentioning a piece of information from the Halych-Volhynian Chronicle which says that in the course of a Bohemian expedition of Duke Danylo of Halych in 1252, Herborn von Fulstein, a nobleman from Westphalia and the pantler of the bishop of Olomouc sent his sword to the duke in sign of allegiance. This sword was perhaps of Western European manufacture. The influence of Western military fashion may have been manifest here already earlier, as implied, among others, by a 12th-century bone badge from the stronghold of Plisnes’ko in Pidhirci (L’viv obl., Ukraine). It displays a knight in a conical helmet with a nasal and in mail armour with long sleeves. However, so far in the vicinity of Sanok there have been no examples of weaponry from the 13th and the early 14th century that could be unambiguously related to the Western European model of military equipment. An example is posed by the crossbow, which began to be of as great importance as the bow in this period. It appeared in this territory already in the Pre-Mongol Period, but its popularity chiefly increased in the last century of the existence of the Halych-Volhynian Duchy (Fig. 2: 7-9). This is suggested by numerous finds of bolt heads with sockets that were discovered in the aforementioned ‘Zamcyszko’ stronghold in Sanok-Biała Góra. A. N. Kirpichnikov related the increase of its importance in Ruthenia, among other things, to the appearance of the aforementioned platelet armour. The increase in the significance of shooter detachments among the troops of the last rulers of Halych-Volhynia is also demonstrated by a (regrettably, isolated) grant charter issued by Duke Jurij Boleslav Trojanovych at the beginning of his rule in Ruthenia (1323) for Hodor Holovach. The charter stated that in exchange for the village of Zabloče in the Przemyśl Land this boyar was supposed to serve more sagitario vel clipeso id est strzelcem albo szcziłtem, that is, as a shooter or with a shield (as a shield-bearer?).

Other parts of equestrian equipment – that is, first of all artefacts related to equestrian equipment and horse tack – do not display significant differences in comparison with similar artefacts from territories of the Latin cultural zone.

Let us try now to inspect arms and armour in the area in question after its incorporation into the Kingdom of Poland. Regrettably, for this period there are almost no iconographic sources that would display the

---

57 Its earliest depictions in the territory of northern Ruthenia are first known from the seal of Ivan Ivanovich from the years 1354-1359. We agree with the opinion of A. Nowakowski that a 12th-century bone badge with an image of an armed centaur that was believed by A. N. Kirpichnikov to be a proof for the Ruthenian provenance of such shields in fact depicts an almond-shaped shield, or “pavésky litevské, scutum Pruslicum, lütische schild or clipeus Litwanicus.” In their early form they became popular in the territory of 13th- and 14th-century Mazovia and became part of so-called “Mazovian armour.” Bearing in mind the strong military-political contacts between Halych-Volhynia and Baltic peoples (especially with the Lithuanians and the Yotvingians), and also with the Mazovians, such a borrowing is obviously natural.

58 Denkstein 1973, 286; Nowakowski 1973; Nowakowski 1980; Nowakowski and Szymczak 1985, 45-46.

59 Nowakowski 1973.

60 Ypat evskiaia..., col. 825; Kronika halicko-wolynska..., 191.

61 Kuchera 1962, Fig. 18:2.

62 Ginalska and Kotowicz 2004, 215, 218, Tab. IX, X:1-4. It is worth remembering that the first mentions of the use of crossbows in the territory of early medieval Rus’ come from the beginning of the 2nd half of the 12th century. However, archaeological finds related to crossbows are dated to the last quarter of the 12th century – cf. Kirpichnikov 1976, 67-68.

63 Kiłko 2006, 95.

64 Fedyk and Kotowicz 2006, 13-14, Fig. 5; Kotowicz 2017, 40, Fig. 9:1-6. In this case, however, it should be assumed that a significant part of these bolts was launched by invaders – in all probability, the Poles – who were besieging the stronghold.

65 Kirpichnikov 1976, 68, 71.

66 This grant was written in Ruthenian and its original regrettable does not survive. It is solely known from its Latin translation signed by the chancery of Sigismund I the Old, dated to 3 April 1533 – cf. Tęgowski 2010, 324-325.

67 Cf. Kotowicz 2002, 11-12, Tab. X:1,3; Ginalska and Kotowicz 2004, 223-226, Tab. XII-XIII; Fedyk and Kotowicz 2006, 16-17, Figs. 13:3-4, 17.2; Glinianowicz and Kotowicz 2008, 83-84, Figs. 5:15-16, 6:3-4, 7:17; Kotowicz 2013a; Kotowicz 2016, Figs. 4:4, 5:5-6; Kotowicz 2017, 39, Fig. 7. A hypothesis once proposed by A. N. Kirpichnikov about the earliest appearance of spurs with rowels in the territory of Ruthenia cannot be maintained any more in view of the most recent discoveries with precise chronology, just to mention that from Wroclaw (Dolnośląskie Voivodeship, Poland), Kirpichnikov 1973; Kirpichnikov 1976, 49; Marek 2018, 573.
appearance of warriors from Crown Ruthenia. What can solely be used are two seals of Duke Władysław II of Opole from the period of his governorate of Ruthenia on behalf of Louis of Anjou King of Hungary. On one of these the duke is depicted on a throne with a sword provided with a discoid pommel. The other seal shows the duke on horseback with a crested great helmet on his head. He is protected with a covered breastplate with chain belts (‘mameliere’), to which a sword and a dagger are attached. The latter is suspended on the knightly belt. His legs are protected with defences known as poleyns (Fig. 5:6). As known from analogies, such a set of a clearly Western European nature could only be afforded by social elites of this period.

Less clear pieces of information are provided by archaeological sources. At present, the assemblage of finds from the Sanok Land which could be with no major doubt dated to the 2nd half of the 14th century is very sparse. They come from dendrochronologically dated cultural levels discovered at the castle in Sanok and in the Market Square in Krosno. Most of these do not have traits which would allow for an identification of their provenance. Therefore, they cannot provide decisive evidence of the nature of the armament of local warriors. Among these traits of weaponry there are crossbow bolt heads, a spur (Fig. 6:1), but also fragments of mail discovered near the remains of stalls in Krosno Market Square (Fig. 5:7). The case of the sword from the vicinity of Jaśliska is similar. Its pommel is ornamented with signs of the Latin cross (Fig. 5:1). The same applies to finds from the stronghold in Mymoń (Krosno District, Podkarpackie Voivodeship) dated mainly to the 2nd half of the 14th century. At this site a dagger scabbard fitting, crossbow bolts heads, spurs and an ornamented bit were discovered (Fig. 6:2). The latter has analogies in 14th-century finds from southern and western Poland. It cannot be excluded that a sword scabbard chape discovered in the ‘Sobień’ castle in Manasterzec (Lesko

68 Vossberg 1854, 30, 31, Tab. 19.
69 Kotowicz and Muzyczuk 2008, 144-148, Figs. 10-11.
70 Kotowicz and Glinianowicz 2011.
71 Cabalska 1970; Cabalska 1975, 333, Fig. 3:a-c,g-h,n; Kotowicz 2007, 58-59, 60-63, Figs. 6:2-3, 7:1-3,5.
The only armament finds that can be related to the Latin model of weaponry are coats of plate armour, fragments of which were discovered at a few sites of old Sanok Land (Fig. 5:2-5).\textsuperscript{71} So far, this type of body protection has not been testified to by finds from the territory of the Halych-Volhynian Duchy.\textsuperscript{74} However, in the early 14th century at the latest it became widespread in the territory of the Kingdom of Poland.\textsuperscript{75} In this place it is also worth underlining that in layers from the 2nd half of the 14th century at the sites in Krosno or Sanok there is a total lack of such weaponry as arrowheads with tangs, mace heads or flail striking ends. These occur in the discussed territory in earlier periods and their absence after c. 1350 does not seem to be merely a matter of the state of research.

Most details related to the discussed issue can be found in written sources, first of all in charters that were mentioned in the introduction. From the territory of the Sanok Land we have 24 such charters, which mainly refer to localities situated in the northern part of this region (Table 1).

Here it is worth underlining one of major differences concerning the regulation of scope of military service in Ruthenia and in other parts of the Kingdom of Poland in this period. In the ‘old’ provinces of the Kingdom, the nobility were obliged to participate in military expeditions ‘in the best way they can’ in exchange for lands they possessed. This resulted from Article 17 of the Statutes of Greater Poland issued by Casimir the Great. However, land grants for nobility in Ruthenia implied a detailed specification of military duties of grantees. According to some researchers, this was caused by the king’s attempt at greater control over the scope of military service in newly annexed territories.\textsuperscript{76}

In the earliest charters which are known to us, that is, in the location charters of the villages of Równe and Iskrzynia issued by Casimir the Great in 1352 it was stated that in the case of a mass levy the grantees were obliged to supply one man in levibus armis videlicet in pancerio, in slappa et cum hasta in equo valenti\textsuperscript{77} and Unum hominem in plattis in slappa et cum hasta, in equo valente.\textsuperscript{78} This means that the warriors were to come mounted, wearing mail armour (pancerio) or coats of plate armour (plattis), in kettle hats (slappa), and armed with lances (hasta).\textsuperscript{79} Attention must be paid to the problem of interpretation of the term hasta (lance) and it other cases lancea (spear), as it could refer both to the weapon itself (lance), to the warrior armed with it or even to the whole retinue led by the lancer.\textsuperscript{80} It seems, however, that in these examples the main weapon of the warrior was mentioned. It is interesting that in spite of the fact that protective armament in the location charter of Równe (mail and kettle hat) was termed as light (levibus armis), the warrior equipped with this armament was supposed to serve as a lancer, that is, a member of a formation which is rather associated with heavy cavalry. It is possible that it was also offensive arms – in this case, the lance – that decided upon the classification of the horsemanship to heavy shock formation, that is, lancers.\textsuperscript{81}

Another charter that was issued in 1359 to Marcin of Cergowa says about the service of a village mayor in plateis, cum hasta in equo.\textsuperscript{82} An identical duty of coming for an expedition in plathis cum hasta in equo was also imposed on village mayors of Lubenia which was founded at this time.\textsuperscript{83} In both cases the grantees were supposed to fulfil military service as lancers and coats of plates were the only protective armament that was mentioned for them.

A new term concerning protective armament appears in a charter of Casimir the Great from 1367. It mentions a duty of the mayor of Krosno to send hominem unum galeatum cum armis et altium cum ballista\textsuperscript{84} in a the general levy is summoned. This is to be interpreted as a description of a retinue composed of a heavily armed lancer and a shooter armed with a crossbow (ballista). The term galea can be simply understood as a helmet in case a given charter also specifies other kinds of protective equipment. However, if a ‘man in helmet’ (homo galeatus) is mentioned and other kinds of defensive armament are omitted, the record concerns a lancer in full armour.\textsuperscript{85}
| No. | Donor | Donated locality, date | Donees and their military duties | Source |
|-----|-------|------------------------|----------------------------------|--------|
| 1   | Casimir III King of Poland | Równe (Krosno District, Podkarpackie Voivodeship) 25 I 1352 | Dythmar civis de Sanok “[..] unum hominem in levibus armis videlicet in pancerio, in slappa et cumusta in equo valenti mittere teneatur [..]” | AGZ VIII, no. 1. |
| 2   | Casimir III King of Poland | Iskrzynia (Krosno District, Podkarpackie Voivodeship) 25 I 1352 | Jacobus dictus Isskra “[..] unum hominem in plattis in slappa et cumusta, in equo valente mittere teneatur [..]” | KDP I, no. 117. |
| 3   | Casimir III King of Poland | Rogi (Krosno District, Podkarpackie Voivodeship) 3 VI 1358 | Petrus advocatus de Colaczicz (Kołaczyc near Jasło, Little Poland) “[..] cum duobus sagitarijs servire tenebitur” | KDM III, no. 721 |
| 4   | Casimir III King of Poland | Cergowa (Krosno District, Podkarpackie Voivodeship) 22 V 1359 | Martinus de Czerкова “[..] in plateis, cumusta in equo [..] servire tenebitur [..]” | AGZ VIII, no. 2. |
| 5   | Casimir III King of Poland | Lubenia (Rzeszów District, Podkarpackie Voivodeship) 22 V 1359 | Fratres Paulus, Jacobus et Nicolaus “[..] in plathis cumusta in equo [..] tenebuntur servire [..]” | ZDM 4, no. 960. |
| 6   | Casimir III King of Poland | Stara Wieś (Brzozowa) (Brzozów District, Podkarpackie Voivodeship) 2 X 1359 | Stephanus Woyoustois heres in Sobnouo (Sobniów near Jasło, Little Poland) “[..] mittere duos sagittarios in equis competentibus [..]” | AGZ III, no. 9. |
| 7   | Casimir III King of Poland | Srogów Niżny (Sanok District, Podkarpackie Voivodeship) / Dydnia (Brzozów District, Podkarpackie Voivodeship) / Jurowce (Sanok District, Podkarpackie Voivodeship) / Temeszów (Brzozów District, Podkarpackie Voivodeship) 25 VI 1361 | Petrus et Paulus fratres de Hungary “cum hasta et duobus sagittariis” | Materialy, no. 1 |
| 8   | Casimir III King of Poland | Daliowa (Krosno District, Podkarpackie Voivodeship) 25 II 1363 r. | Hriczko Zarouicz “[..] in equo valente sex marchas, armatus cum hasta [..] servire debet [..]” | AGZ VIII, no. 4. |
| 9   | Casimir III King of Poland | Blizne (Brzozów District, Podkarpackie Voivodeship) 25 IV 1366 | Falco de Crosno “[..] cum balista deceritur expeditus servire teneatur [..]” | AGZ VIII, no. 7. |
| 10  | Casimir III King of Poland | Krosno (Krosno District, Podkarpackie Voivodeship) 19 XI 1367 | Michael et Iacussius “[..] hominem unum galeatum cum armis et alium cum ballista [..] mittere debet” | AGZ III, no. 17. |
| 11  | Casimir III King of Poland | Tyczyn (Rzeszów District, Podkarpackie Voivodeship) 14 III 1368 | Bartholdus Tyczner “[..] cum una hasta et balista deceritur expediti [..] servire [..]” | KDM I, no. 294 |
| No. | Donor | Donated locality, date | Donees and their military duties | Source |
|-----|-------|------------------------|----------------------------------|--------|
| 12  | Casimir III  
King of Poland | Strachocina (Sanok District, Podkarpackie Voivodeship)  
10 V 1369 | Petrus et Gregorio fratres germanis de Cunowy (Kunowa near Biecz in Little Poland)  
“[…] servire in duabus joppis, uno pancerio, pilleo, manicis fereis, balista et equo quatuor marcas valente […]” | ZDM 4, no. 999. |
| 13  | Duke  
Władysław II  
of Opole  
Hungarian Governor of Ruthenia | Dudyńce (Sanok District, Podkarpackie Voivodeship)  
1372-1378 | Mathias capellanus  
“[…] cum uno sagittario in equo valente […] servire teneatur.” | ZDM 4, no. 1045. |
| 14  | Duke  
Władysław II  
of Opole  
Hungarian Governor of Ruthenia | Jablonica Ruska (Brzozów District, Podkarpackie Voivodeship)  
31 V 1373 | Przybilslaus filius Phal de terra Lancicie (Łęczyca Land)  
“[…] cum uno balistario bene armato in equo valido […] servire […]” | AGZ VII, no. 9. |
| 15  | Duke  
Władysław II  
of Opole  
Hungarian Governor of Ruthenia | Lubatowa (Krosno District, Podkarpackie Voivodeship)  
15 III 1376 | Stanislaus Thoka  
“[…] cum una hasta et uno sagittario in equis et armis bene valentibus et preparatis […] servire tenebuntur” | AGZ VIII, no. 10. |
| 16  | Duke  
Władysław II  
of Opole  
Hungarian Governor of Ruthenia | Rymanów (Krosno District, Podkarpackie Voivodeship)  
15 III 1376 | Nicolaus Reymanni  
“[…] cum una hasta et uno sagittario in equis valentibus et armis decentibus servient […]” | ZDM 1, no. 149. |
| 17  | Duke  
Władysław II  
of Opole  
Hungarian Governor of Ruthenia | Pisanowce (Sanok District, Podkarpackie Voivodeship)  
14 X 1377 | Iasko Puskowsky  
„[…] cum uno sagittario […]” | ZDM 4, no. 1035. |
| 18  | Duke  
Władysław II  
of Opole  
Hungarian Governor of Ruthenia | Sienica (Przemysł District, Podkarpackie Voivodeship)  
8 XI 1377 | Fratres Petrus Cosarowicz et Clish  
“[…] in equo cum sagittis et gladio expensis propriis servire tenebuntur.” | ZDM 4, no. 1036. |
| 19  | Neko  
Mayor of Sanok | Wienkowie (Sanok District, Podkarpackie Voivodeship)  
8 II 1380 | Thodor et Nestko fratres germanis  
“[…] in equo cum uno arcu, seu balista […] servire tenebuntur […]” | ZDM 1, No. 157. |
| 20  | Mary  
Queen of Hungary | Poraż (Sanok District, Podkarpackie Voivodeship)  
20 II 1363 | Fratres Joseph Olahus (filius Petro) et Mathias et domina Mussata  
“[…] cum una hasta decenter expediti servire […]” | AGZ VII, no. 14. |
| No. | Donor | Donated locality, date | Donees and their military duties | Source |
|-----|-------|------------------------|-----------------------------------|--------|
| 21  | Zyndram from Maszkowice Kraków Sword-Bearer | Królik Polski (Krosno District, Podkarpackie Voivodeship) 4 X 1389 | Hanzel dictus Ion “[…] servire […] cum hasta in equo competenti.” | AGZ VIII, no. 19. |
| 22  | Piotr Kmita Castellan of Lublin | Wara (Brzozów District, Podkarpackie Voivodeship) 2 VII 1391 | Sandek from Wara66 “Mayor is obliged to participate in military expeditions with two lances” | Fastnacht 2002, 220. |
| 23  | Władysław II Jagiello King of Poland | Długie (Sanok District, Podkarpackie Voivodeship) 30 X 1395 | Iachnik dictus Dzeweczka de Schosueschow “[…] cum una lancea et tribus sagittarys […] servire […]” | AGZ III, no. 60. |
| 24  | Władysław II Jagiello King of Poland | Szczepańcowa (Krosno District, Podkarpackie Voivodeship) 5 XI 1399 | Miles strennus Petrassius de Falcow venator sandomieriensis “[…] cum una lancea seu hasta cum armis et equo valentibus […] desrvire.” | AGZ III, no. 72. |

An exceptionally complete set of defensive armour was specified in the text of the foundation charter of Strachocina from 1369. As can be said on the basis of this, local mayors – Piotr and Grzegorz – were to serve in the general levy in duabus joppis, uno panceriio, pilleo, manicis fereis, balista et equo.87 The ‘duae joppes’ which was mentioned in the first place is yet another term for a coat of plates armour, apart from the aforementioned plattis.88 As may be inferred from this charter, apart from the coat of plates armour and the mail, the warriors from Strachocina were also to come with kettle hats (pilleo) and with manicis fereis, that is most probably with plate protection for their upper limbs and (or) with gauntlets. In spite of the fact that this description concerns a shooter whose principal weapon was the crossbow (ballista), the set of defensive armament at the disposal of the mayor of Strachocina seems extremely robust. If it were not for the lack of plate protectors for the lower limbs, it could well correspond to the equipment of a heavily armed knight of this period.89

As a rule, the duty of participation in a military expedition concerned not only the grantee himself, but also his subordinates. They formed together a retinue, composed of a lancer and one or two shooters who accompanied him. It was only in one case that a certain Iachnik Dziewieczka of Zarszyn was to participate in military expeditions cum una lancea et tribus sagittarys,90 that is, as a lancer with three shooters.

The main role in the retinue was played by the lancer who came on a good and valuable horse and almost always with a lance (hasta). Sometimes charters specify his equipment. Four of these say that the lancer has to be armed or to be properly armed (armatus, armis bene valentibus et preparatis, armis decentibus). The aforementioned record of hominem unum galeatum cum armis in all probability also applied to a lancer. Among the specified parts of military equipment there are mail armour (pancerio) and coats of plate armour (plateis, plathis, plattis) which are mentioned as many as four times. Additionally, a kettle hat (slappa) is mentioned twice (see Table 1).

Another group of warriors who are mentioned in grant charters are shooters. They appear both as companions of lancers as well as individually. It was found out in scholarship that the term sagittarius usually referred to a crossbowman (balistarius).91 This is testified to by mentions of warriors armed with crossbows (ballista), although in one case it is said that the warrior could come with a bow or a crossbow (cum arcu seu balista).92 The most interesting description referring to

---

86 The original document is not preserved. In the Archive of Sanguszko Dukes there is a discharge of this document in which Fedko is mentioned instead of Sandko – Archiwum, no. VII.
87 ZDM 4, 999.
88 Nowakowski 1994, 235-236; Nowakowski 2006, 125.
89 Nadolski and Dankowa 1983, 107.
90 AGZ III, 60.
91 Nadolski and Dankowa 1983, 97-100.
92 ZDM 1, 157. It is worth stressing that the first mention in which there is no doubt that we are dealing with a bowman and not a crossbowman comes from as late as 1437 and concerns Jakub Wołoch (Wallachian). This charter refers to military duties of the mayor of Szczawne who is to serve (…) uno equite cum arca (…) – ZDM 5 1970, 1424. According to A. Nadolski and J. Dankowa,
a shooter from the Sanok Land concerns Piotr and Jerzy, the afore-mentioned mayors of Strachocina. They were supposed to attend the military expedition on horseback, with crossbows, coats of plate armour, mail armour, kettle hats and upper limb protectors. There are also mentions of shooters who are ‘well-’, or ‘properly’ armed. In one case the shooter was to serve ‘with arrows and a sword’ (cum sagittis et gladio). Within the context of our considerations of special interest is also the ethnic origin of persons to whom the mentioned charters apply. There is no doubt that we are dealing with representatives of two cultural zones: the Eastern and the Western one. It is certain that Hriczko Zarouicz of Daliowa who served as armatus cum hasta was Ruthenian. However, a brief description does not specify his set of armament. It cannot be excluded that brothers Thodor (Teodor?) and Nestko from the village of Wenkowe who were to serve as shooters were also Ruthenians. In their case it is of interest that they could come both with crossbows and with bows and this is the only case where the latter kind of projectile weapon was mentioned.

More numerous mentions are no doubt related to persons from the Latin sphere. According to Adam Fastnacht, a prominent researcher of the medieval history of the Sanok Land, among the mentioned grantees the following persons were Polish: Jakub Iskr in Iskrzynia, Stefan son of Wojost in Stara Wieś, and Stanisław Toka in Lubatowa. It seems that Jaśko Puskowski in Pisanowce, Przybysław (who came from the Łęczyca Land) son of Fal in Jablonica Ruska, Janek Dziewieczka in Długie, and Pietrasz of Falkow (in the Sandomierz Land) in Szczepańcowa may have also belonged to this group. Nevertheless Fastnacht says that the following persons were Germans: Dythmar in Równe, Barthold Tyczner (whose origin, according to this researcher, can be related to the Moravian town of Titschein) and Hanzel in Królik Polski. This group can probably also encompass Mikołaj son of Reymann in Równe, Jurowce and Temeszów is that they came from Hungary. However, a brief description does not specify his set of armament. It cannot be excluded that brothers Thodor (Teodor?) and Nestko from the village of Wenkowe who were to serve as shooters were also Ruthenians. In their case it is of interest that they could come both with crossbows and with bows and this is the only case where the latter kind of projectile weapon was mentioned.

More numerous mentions are no doubt related to persons from the Latin sphere. According to Adam Fastnacht, a prominent researcher of the medieval history of the Sanok Land, among the mentioned grantees the following persons were Polish: Jakub Iskr in Iskrzynia, Stefan son of Wojost in Stara Wieś, and Stanisław Toka in Lubatowa. It seems that Jaśko Puskowski in Pisanowce, Przybysław (who came from the Łęczyca Land) son of Fal in Jablonica Ruska, Janek Dziewieczka in Długie, and Pietrasz of Falkow (in the Sandomierz Land) in Szczepańcowa may have also belonged to this group. Nevertheless Fastnacht says that the following persons were Germans: Dythmar in Równe, Barthold Tyczner (whose origin, according to this researcher, can be related to the Moravian town of Titschein) and Hanzel in Królik Polski. This group can probably also encompass Mikołaj son of Reymann in Równe, and perhaps Falko of Krosno, too.

There are also a number of names which do not determine ethnic origin, although they seem to imply the Latin cultural sphere (“Petrus”, “Martinus”, “Paulus, Jacobus et Nicolaius”, “Michael et Iacussius”, “Gregorius”, “Mathias”). What we know about brothers Piotr and Pawel who received grants in Srogów Niżny, Dydnia, Jurowce and Temeszów is that they came from Hungary. This, however, does not determine their ethnicity.

The defensive armament of combatants from the Latin cultural sphere, among whom there were both lancers and shooters, was strongly diversified. Apart from universal elements, such as, for example, mail, there were also such ones that seem to be characteristic of the Western military model. Among these there are coat of plates armour and perhaps also kettle hats and gauntlets.

To sum up, it must be said that the analysis of available sources allows us – in our opinion – to assume that after the incorporation of Halych Ruthenia by Casimir the Great in the mid-14th century there was a significant change in the armament of warriors in the territory of the Sanok Land in the 2nd half of the 14th century. Local elements which can be seen in the archaeological finds and in the iconography of the 13th-, and early 14th century and which are related to the Eastern European model of armament (such as lamellar and scale armours, conical helmets, flails, maces, bows) were replaced to a great degree by weaponry which evolved in the Latin sphere (coat of plates, kettle hats, plate defences of limbs, crossbows as weapons of mounted shooters). This was caused not only by the settlement of nobility and colonists from the Kingdom of Poland, Silesian Duchies, the Kingdom of Hungary and the Holy Roman Empire, who brought in new sets of military equipment, but first of all by the introduction of a model of military organisation that was new in these territories. However, it is worth stressing that influences from the Western European cultural sphere with regard to arms and armour can be seen in the territory of Halych-Volhynia much earlier, but to a much smaller degree. At the present stage of research, we are not able to determine whether and what elements of Eastern European military equipment that was characteristic of the period before the mid-14th century survived in this territory in the period in question. It is worth paying attention to the fact that possible Ruthenians who were mentioned in sources – Thodor and Nestko – could participate in military expeditions with bows.

At present, it is difficult to determine whether these observations could be applied to the entire territory of Red Ruthenia, as the Sanok Land was only a minor part of it. This requires a separate broad-scale study.

---

93 Nadolski and Dankowa 1983, 98.
94 ZDM 4, 999.
95 ZDM 4, 1036.
96 Fastnacht 2007, 208.
97 Fastnacht 2007, 207.
Sources

AGZ III – Akta grodzkie i ziemskie z czasów Rzeczypospolitej Polskiej z archiwum tak zwanego bernardyńskiego we Lwowie, vol. III. Lwów 1872.

AGZ VII – Akta grodzkie i ziemskie z czasów Rzeczypospolitej Polskiej z archiwum tak zwanego bernardyńskiego we Lwowie, vol. VII. Lwów 1878.

AGZ VIII – Akta grodzkie i ziemskie z czasów Rzeczypospolitej Polskiej z archiwum tak zwanego bernardyńskiego we Lwowie, vol. VIII. Lwów 1880.

Archiwum – Archiwum książąt Sanguszków w Slawucie, vol. 5, ed. B. Gorczak. Lwów 1897.

KDM I – Kodeks Dyplomatyczny Małopolski, vol. I (1178-1386). Kraków 1876.

KDM III – Kodeks Dyplomatyczny Małopolski, vol. III (1333-1386). Kraków 1887.

KDP I – Kodeks Dyplomatyczny Polski, vol. I. Warszawa 1847.

Kronika halicko-wołyńska… – Kronika halicko-wołyńska. Kronika Romanowiczów, transl. D. Dąbrowski, A. Jusupović. Kraków, Warszawa 2017.

Materiały – Materiały do historii suspil’no-politycznych i ekonomicznych widocznych w średniowiecznym Zakładzie ośrodka Ukrainy, ed. M. Hrushevs’kyi. L’viv 1906.

Ypat’evskaia – Ypat’evskaia letopis’. In: Polnoe Sobranie Russikh Leopiseĭ 2. Sankt-Peterburg 1908.

ZDM 1 – Zbiór Dokumentów Małopolskich, vol. 1. Wrocław, Warszawa, Kraków 1962.

ZDM 4 – Zbiór Dokumentów Małopolskich, vol. 4. Wrocław, Warszawa, Kraków 1969.

ZDM 5 – Zbiór Dokumentów Małopolskich, vol. 5. Wrocław, Warszawa, Kraków 1970.

Bibliography

Bodnar R., Rozmus D., Szmoniewski B. Sz. 2006. Early Medieval Arrowheads from Smugowa Góra near Troks in Olkuski District. “Sprawozdania Archeologiczne” 58, 531-542.

Cabalska M. 1970. Wędzidła z pobocznicami z wielowarstwowych stanowisk wczesnośredniowiecznych. “Wiadomości Archeologiczne” 35(1), 14-21.

Fedoryshyn M. 2015. Bulava „klevets” chi bulava „hachok”? In: V. S. Travins’kyj, N. M. Ribchak, I. O. Staren’kyj, A. F. Hutsal, O. B. Komarnits’kyj, O. L. Bazhenov, B. S. Strotsen’, A. B. Zadorozhniuk (eds.), Arkheologiia & Fortyfikatsiia Ukrainy. Zbirnyk materialiv V Vseukraїns’koї naukovo-praktychnoї konferentsїi. Kam’ianets’-Podil’s’kyj, 147-150.

Fedyk R., Kotowicz P. N. 2006. Zamczysko. Średniowieczne grodzisko w Sanoku – Białej Górze. Część I. Sanok.

Florek M. 2015a. Wczesnośredniowieczny rogowy grot strzały ze Wzgórza Zamkowego w Sandomierzu. “Acta Militaria Mediaevalia” 11, 238-239.

Florek M. 2015b. Horn and Bone Arrowheads from Sandomierz. Contribution to the Study of Mongol-Ruthenian Raids on Sandomierz Region in the Middle Ages. “Studia Humanistyczno-Społeczne” 10, 15-26.

Ginalski J. 2016. Gdzie leżał najstarszy Sanok? In: B. Chudzińska, M. Wojenka, M. Wołoszyn (eds.), Od Bachórza do Światowida ze Zbrucza. Tworzenie się słowiańskiej Europy w ujęciu źródłoznawczym. Księga jubileuszowa Profesora Michała Parczewskiego. Kraków, Rzeszów, 555-567.

Ginalski J., Kotowicz P. N. 2004. Elementy uzbiorzenia i oporządzenia jeździeckiego z grodziska wczesnośredniowiecznego „Horodyszcze” w Trepicy, pow. Sanok, stan. 2. “Materiały i Sprawozdania Rzeszowskiego Ośrodka Archeologicznego” 25, 187-257.

Ginalski J., Kotowicz P. N. 2019. Gród u „wrót węgierskich” – staroruski Sanok i jego najbliższe zaplecze. In: A. Janeczuk, M. Parcewski, M. Dzik (eds.), Pogranicza w polskich badaniach mediewistycznych. “Materiały V Kongresu Mediewistów Polskich” 3. Rzeszów, 123-148.

Ginter K. 2008. Udział szlachty polskiej w pospolitum ruszeniu w XIV i XV wieku. Aspekty prawne i stan faktyczny. Kraków.
Liwoch R. 2014a. *Topór z Horodnicy na zachodniej Ukrainie*. “Acta Militaria Mediaevalia” 10, 203.
Liwoch R. 2014b. *Grot włóczni z naddniestrzańskiej Horodnicy*. “Acta Militaria Mediaevalia” 10, 206-207.
Liwoch R. 2016. *Militaria jako ślady kontaktów między Wschodem a Zachodem Europy w średniowieczu*. In: V. Nagirnyy (ed.), *Rus' and Countries of the Latin Culture (10th-16th C.)*. Colloquia Russica 1(6). Kraków, 95-110.
Ławrynowicz O., Strzyż P. 2001. *Nowe zabytki broni obuchowej z okolic Roztocza*. “Archeologia Polski Środkowowschodniej” 6, 258-264.
Marek L. 2018. *Militaria*. In: J. Piekalski, K. Wachowski (eds.), *Rytm rozwoju miasta na kulturowym pograniczu. Studium strefy Placu Nowy Targ we Wrocławiu*. Wratislavia Antiqua 23(2). Wrocław, 563-664.
Medvedev A. F. 1959a. *K istorii plastinchatogo dospekha na Rusi*. “Sovetskaia arkheologiia” 3(1959), 119-134.
Medvedev A. F. 1959b. *Oruzhie Novgoroda Velikogo*. “Materialy i issledovaniia po arkheologii SSSR” 65, 121-191.
Michałak A. 2006. *Wpływy wschodnie czy południowe? Z badań nad pochodzeniem buław średniowiecznych na ziemiach polskich*. “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 571, 48-74.
Nadolski A. 1994. *Ogólna charakterystyka*. In: A. Nadolski (ed.), *Polska technika wojskowa do 1500 roku*. Warszawa, 186-198.
Nadolski A., Dąbkowa J. 1983. *Uwagi o składzie i uzbrojeniu polskiej jazdy rycerskiej w latach 1350-1450*. “Studia i Materiały do Historii Wojskowości” 26, 91-110.
Niemiec D. 2018. *Did Conrad of Mazovia Play Chess on Wawel?* In: A. Stępin (ed.), *The Cultural Role of Chess in Medieval and Modern Times. 50th Anniversary Jubilee of the Sandomierz Chess Discovery*. Bibliotheca Fontes Archaeologici Posnanienses 21. Poznań, 55-66.
Nowakowski A. 1973. *Przyczynki do poznania tak zwanej zbroi mazowieckiej*. “Kwartalnik Historii Kultury Materialnej” 21(2), 289-298.
Nowakowski A. 1980. *Jeszcze o genezie pawęży (Uwagi na marginesie książki A. N. Kirpicznikowa).* “Kwartalnik Historii Kultury Materialnej” 28(1), 111-115.
Nowakowski A. 1984. *Uzbrojenie ochronne*. In: A. Nadolski (ed.), *Polska technika wojskowa do 1500 roku*. Warszawa, 198-249.
Nowakowski A., Szymczak J. 1985. *Rodzaje uzbrojenia ochronnego w Polsce w okresie monarchii stanowej w świetle źródeł pisanych*. “Kwartalnik Historii Kultury Materialnej” 33(1-2), 29-48.
Nowakowski P. A. 1998. *Analiza archeologiczna militariów z Radymna woj. przemyskiego*. “Przemyskie Zapiski Historyczne” 11, 7-59.
Nowakowski P. A. 2006. *Arsenały domowe rycerstwa polskiego w średniowieczu*. Toruń.
Paszkiewicz H. 1925. *Polityka ruska Kazimierza Wielkiego*. Warszawa.
Petegirich V. M. 1990. *Oruzhie i snariazhenie vsadnika*. In: A. P. Chernysh (ed.), *Arkheologia Prikarpat'ia, Volyni i Zakarpat'ia (ranneslavianskij i drevnerusskij periody)*. Kiev, 163-171.
Peteyrych V. M. 2010. *Dví ridkisni znakhidky Kniažhoї doby iz Sokalia na L’vivshchyny*. “Naukovi studiї” 4, 254-267.
Pudło P. 2014. *Historia pewnego miecza, czyli o korzyściach z kwerend muzelanych*. “Acta Militaria Mediaevalia” 10, 204-206.
Pyvovarov S. V. 2012. *Metalovi navershia bulav z davn’orus’kikh pamiatok Bukovyny*. “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 724, 31-35.
Pyvovarov S. V., Il’kiv M., Kalinichenko V. 2014a. *Predmety seredn’ovichnoho ozbroiennia z Chornivs’koho horodyshcha pershoї polovyny XIII st. (doslidzhennia 2012 r.)*. “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 784, 18-24.
Pyvovarov S. V., Kalinichenko V. 2014b. *Predmety ozbroiennia dal’n’oho boju z Chornivs’koho horodyshcha pershoї polovyny XIII st.* (arkheolohichni doslidzhennia 2012 r.). In: F. Dmytrienko, H. V. Boriak, Ia. O. Ishchenko, O. O. Popel’hyts’ka, V. M. Prokopenko, D. V. Toichkin, V. V. Tomozov (eds.), *Istoriia Davn’oi Zbroi. Doslidzhennia 2014*. Kyiv, 136-148.

Pyvovarov S. V., Kalinichenko V. 2014c. *Navershia rukivia meha z Chornivs’koho horodyshcha pershoї polovyny XIII st.*. In: F. Dmytrienko, H. V. Boriak, Ia. O. Ishchenko, O. O. Popel’hyts’ka, V. M. Prokopenko, D. V. Toichkin, V. V. Tomozov (eds.), *Istoriia Davn’oi Zbroi. Doslidzhennia 2014*. Kyїv, 136-148.

Rozhko M. 2002. *Zbroia dal’n’oho boju iz starodavn’oi Tustani (nakonechnyky stril luka ta samostrila – arbaleta).* “Zapysky Naukovoho Tovarystva im. Shevchenka” 244, 287-311.

Savyts’kyĭ V., Paliĭchuk M., Sobuts’kyĭ M. 2009. *Zakhysnyĭ obladunok Volyn’ skykh voїniv periodu davn’oi Rusi*. “Mynule i suchasne V olyni ta Polissia. Storinky voiennoї istoriї kraiu” 30, 26-30.

Savycz J. 2012. *Władysław książę opolski, wieluński, kujawski, dobrzyński, pan Rusi, palatyn Węgier i namiestnik Polski (1326/1330 – 8 lub 18 maja 1401).* Kraków.

Stryź P. 2005. *Ruskie buławy „gwiaździste” z terenu Małopolski.* “Acta Militaria Mediaevalia” 1, 107-114.

Stryź P. 2006. *Uzbrojenie we wczesnośredniowiecznej Małopolsce.* Acta Archaeologica Łódzienia 52. Łódź.

Swaryczewski A. 1987. *Platnerze krakowscy.* Warszawa, Kraków.

Szpunar A., Glinianowicz M. 2006. *Uzbrojenie późnośredniowieczne z zamku w Czchowie w Małopolsce.* “Acta Militaria Mediaevalia” 2, 137-188.

Swierczewska T. 2011. *Mech u Halysť komu Voľyns’koї a pložnjástrv v polozhnych a pložnjástrv v polozhnych.* “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 752, 5-13.

Szerszuk D. 2003. *Zbroia dal’n’oho boju iz starodavn’oi Tustani (nakonechnyky stril luka ta samostrila – arbaleta).* “Archeologia Polski Środkowowschodniej” 6 (2001), 255-257.

Szerszuk D. 2005. *Średniewieczna militaria proveniencji wschodniej w zbiorach Muzeum Regionalnego w Tomszowie Lubelskim.* “Acta Militaria Mediaevalia” 1, 133-141.

Ters’kyj S. V. 2001. *Oboronný kompleks stolytsi volynskogo kniazivstva – mista Volodymyra.* “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 62, 13-26.

Ters’kyj S. V. 2002. *Oboronný kompleks kniazhogo mista Peresopnytsi.* “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 634, 8-17.

Ters’kyj S. V. 2010. *Zbroia ta zakhysnyi obladunok nacelnennia Nadstubblianshchyny – volosti kniazhoho mista Peresopnytsi.* “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 670, 22-30.

Ters’kyj S. V. 2011. *Sporadzhennia druzhynnyka Nadstubblianshchyny – volosti kniazhoho mista Peresopnytsi.* “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 693, 16-25.

Ters’kyj S. V. 2012a. *Ukraїns’ka istoriohrafiia rozvytku zbroї doby Halysť ko-Voľyns’koї.* “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 752, 17-94.

Ters’kyj S. V. 2012b. *Znakhidky predmetiv ozbroiennia X-XIII st.*. In: V. S. Travins’kyĭ, R. V. Iołtukhov’s’kyĭ, N. M. Ribchak, A. F. Hutsal, O. B. Komarnits’kyĭ, O. D. Mohylov, B. S. Strotsen’ (eds.), *Arkeologiya & Fortyfikatsiia Ukrainy. Zbirnyk materialiv V Vseukraїns’koї naukovo-praktychnoi konferentsїi*. Kام’янець’-Podil’s’kyĭ, 68-72.

Ters’kyj S. V. 2013. *Meh u Halysť komu Voľyns’koї.* “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 752, 5-13.

Ters’kyj S. V. 2014. *Kisten’ u Halysť komu Voľyns’koї.* “Visnyk Natsional’nogo universytetu ‘L’vivs’ka politekhnika’. Derzhava ta armiia” 724, 3-12.
