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A CONFRONTATION BETWEEN TWO WORLDS. THE ARMS AND ARMOUR OF CENTRAL EUROPEAN AND MONGOL FORCES IN THE FIRST HALF OF THE THIRTEENTH CENTURY

Just before the middle of the thirteenth century, a conflict broke out between the armed central European knights using tactics typical of contemporary Latin Europe and the invaders arriving from the remote part of the Steppe equipped with different types of arms and applying their own tactics. The climaxes of this confrontation were two battles fought almost simultaneously at the beginning of April 1241: the Battle of Legnica, which took place in Henry the Pious' duchy on April 9th and the Battle of Mohi, which was fought in the kingdom of Hungary, ruled by Béla IV, on April 11th. Both the encounters ended in a complete failure of the European forces. Duke Henry the Pious was killed in battle and King Béla IV had to escape to an island in Dalmatia. These defeats have frequently been analysed in the hitherto existing historical literature and the highly effective strategy and tactics of the Mongol army have commonly been considered the reason for the defeats. However, none of the researchers has yet paid due attention to the arms and armour of the warriors participating in the battles. Some general remarks have only been made pointing to the superiority of the European weapons over the arms and armour used by the Mongol invaders. A rather subjective opinion that they were effective and functional as well as frequently tested in both internal conflicts with identically armed knights from Latin European countries and with outer enemies, for example during crusades, was very widespread. The advantages of the strategy and tactics applied by these medieval nomads ought not to be questioned, but even the best military art will not lead to a victory if the warriors are not equipped with useful and practical weapons. In addition, the best way to test arms is to use them in an encounter with an enemy equipped with a different type of weapon. Therefore, it seems worthwhile to compare the military accessories

carried by the nomads with the arms and armour owned by the enemies of the Steppe people. Researchers are much more familiar with the choice of weapons used by knights coming from the Latin cultural circle than with military accessories characteristic of other civilization centres of the contemporary world.

Comparing the military accessories of the thirteenth century European knights and the Steppe nomads, attention should be paid to not only such obvious differences as the shape of the objects, coming from very remote cultural circles, but mainly to the functional aspects and usefulness of the two groups of weapons.

Defensive arms

Body defences

Lamellar armour made of small plates fixed together by the use of leather straps or sometimes rivets was the most popular type of body and limb defence used by the nomad warriors. They also wore armour made of hardened leather, soft quilted garments and sporadically chain mail¹. These defences were used to protect either parts of the body or the whole warrior. Tests made by Russian arms researchers proved that lamellar armour of the nomad type was very functional.

¹ Yu. S. K h u d y a k o v, *Vooruzhenye srednevekovykh kochevnikov Yuzhnoy Sibiri i Tsentralnoy Azii*, Novosibirsk 1986, p. 121; Yu. S. K h u d y a k o v, A. I. S o l o v e v *Iz istoriy zashchitnogo dospekha v Severnoy i Tsentralnoy Azii*, [in:] *Voyennoe delo drevnego naseleniya Severnoy Azii*, Novosibirsk, 1987, pp. 135-163; W. Ś w i ę t o s ł a w s k i, *Arms and Armour of the Nomads of the Great Steppe in the Times of the Mongol Expansion (12th-14th Centuries)*, Łódź 1999, pp. 21-32; V. V. G o r b u n o v, *Voyennoye delo naseleniya Altaya v III-XIV vv.*, part I, *Oboronitelnoye vooruzhenye (dospekha)*, Barnaul 2003.

A copy of a suit of armour made from iron lamellae fixed together by means of leather straps was subjected to side and thrusting weapon strike tests², which revealed that armour of this type had been an effective protection against arrow and spearheads. After a blow, the small plates met, the arrow or spearhead got stuck between them and the shock absorbed. The stronger the blow, the tighter the grip. As a result, the weapon's tip could not pierce the armour and reach the wearer's body. The armour was also an effective protection against blows struck with a saber though such a blow could cut the leather straps and thus loosen the clothing. A single blow struck with a saber which cut a leather strap did not cause the armour to break up, because the remaining straps held it together. However, a number of blows struck with side arms posed a major threat. Needless to say, neither leather armour nor a quilted garment provided adequate protection against hard blows struck with side arms, thrusting and throwing weapons.

Chain mail was the most popular body defence used by thirteenth century European knights from the Latin circle. Not surprisingly, Claude Blair, one of the most outstanding European arms and armour researchers, called the period between 1066 and 1250 'the Age of Mail' and Andrzej Nadolski, a distinguished Polish scientist, argued that 'between the mid-twelfth and the mid-thirteenth century chain mail was in its heyday'³. Contemporary chain mail looked like a long coat protecting the warrior's body. In addition, it was frequently equipped with sleeves and trousers made from chain net covering the arms and legs as well as with a hood spread over the head and the nape. The iron or steel rings of mail constituted a very effective protection against cuts with long side arms, such as swords and sabers. They were however, easily torn by hard blows struck with throwing weapons, for example, arrowheads or spearheads, and with shafted weapons: spears and lances. Another disadvantage of contemporary mail was its large size and consequently its weight,

which made it impossible for the wearer to move fast and easily. This is the reason why when it was at the peak of its development, new solutions regarding body protection had to be sought. During the fourteenth and fifteenth centuries, part and subsequently full plate armour became the most popular knightly body defences in Latin Europe.

Besides chain mail, plate armour was also in use in thirteenth century Central and Western Europe. Researchers interested in arms and armour dating back to this period have long found it difficult to establish its shape and degree of popularity. However, the fact that at that time it was much less common than chain mail cannot be questioned.

Helmets

The helmets worn by Steppe warriors appeared in a variety of forms. They were either spherical or cone-shaped head coverings varying in height⁴. They were usually made from several segments bound with a hoop frequently cut out from a single sheet of metal. They were frequently equipped with nasals, covering part of the face, and lamellar or, less frequently, chain neck guards.

Cone-shaped helmets made of one sheet of metal or from several pieces were also in widespread use in thirteenth century Europe. According to some researchers, they appeared under the influence of Eastern civilization. However, the forms worn in the thirteenth century were undoubtedly improved local developments. Like in the case of nomadic artifacts, European helmets had nasals protecting the face and neck guards made from chain net. Although, they differed in shape from

⁴ M. V. G o r e l i k, *Oriental Armour of the Near and Middle East from the Eighth to the Fifteenth Centuries as Shown in Works of Art*, [in:] *Islamic Arms and Armour*, London 1979, pp. 38-41; M. V. G o r e l i k, *Ranniy mongolskiy...* pp. 191-192, fig. 11; V. E. M e d v e d e v, *O shleme srednevekovogo amurskogo vojna (taynik s ostakami dospekha v Korsakovskom mogilnike)*, [in:] *Voyennoye delo drevnikh plemen Sibiri i Tsentralnoy Azii*, Novosibirsk 1981, fig. 4, 1; V. V. O v s y a n n i k o v, *K voprosu o zashchitnom vooruzhenye pozdnikh kochevnikov Yuzhnogo Urala*, [in:] *Voyennoye delo drevnego i srednevekovogo naseleniya Severnoy i Tsentralnoy Azii*, Novosibirsk 1990, pp. 141-142, fig. 1; Yu. S. K h u d y a k o v, *Vooruzhenye tsentralnoazyatskikh kochevnikov v epokhu rannego i razvitya srednevekovyaya*, Novosibirsk 1991, pp. 85-86, fig. 44; W. Ś w i ę t o s ł a w s k i, *Arms and Armour...*, p. 33-39; V. V. G o r b u n o v, *Voyennoye delo...*, pp.65-73, figs 42-49.

² M. V. G o r e l i k, *Ranniy mongolskiy dospek*, [in:] *Arkheologiya, etnografiya i antropologiya Monglii*, Novosibirsk 1987, p. 183.

³ C. B l a i r, *European Armour circa 1066 to circa 1700*, London 1958, pp. 19-24; A. N a d o l s k i, *Broń i strój rycerstwa polskiego w średniowieczu [Arms and Dress of Polish Knights in the Middle Ages]*, Wrocław-Warszawa-Kraków-Gdańsk 1979, p. 65.

their nomadic analogues, European head coverings were similar to them in respect of construction and function. However, in thirteenth century Western and Central Europe, there also existed a helmet which was completely differed from nomadic head defences. It was the so-called great helm. Helmets of this type were barrel-shaped and entirely closed with flat and then hemispherical tops. The helm became a typical attribute of a knight and was frequently depicted in iconography, particularly heraldry. Regrettably, it was not a successful invention. Made from several sheets of metal riveted together at different angles, great helms did not offer adequate protection against head injuries. Blows struck by the enemy did not slide down their sides impeded by joints and flat constructional parts. The helmet was too heavy and the eye slits were so small that they restricted visibility and made breathing difficult. It turned out especially useless in encounters with a mobile enemy, like nomadic warriors. Despite numerous improvements introduced at the beginning of the fourteenth century, during the first half of that century, the great helm stopped being used in battle and started to be worn only in parades and tournaments.

Shields

Shields were used by both thirteenth century European knights and Steppe warriors. They did, however, differ in form. Nomadic shield must have been mostly circular⁵ while a contemporary knightly shield was shaped like a long triangle. Both types of shield were made from wooden boards covered in leather. Besides those wooden defences, the nomads also had light shields woven from twigs. All these shields were very functional and it is hard to say which of them were more practical. The European shield could have been heavier and because of its triangular shape more difficult to carry on horseback.

Offensive arms

Side arms

In the thirteenth century, the main type of long side weapon used by the Steppe people was

the saber⁶. It was relatively light and thus much more suitable for quick, complicated blows than the European sword. It was easy to use on horseback and the blows could cause long and deep wounds if the enemy's body was not protected by a suit of armour or chain mail. Arms of this type were, however, much less effective if the knight was wearing armour or chain mail. As they were much lighter than swords, their cutting blows might have failed to pierce metal body defences.

The thirteenth century sword, the only kind of side weapon used by contemporary West and Central European knights, was still relatively short, broad and heavy. It was suitable for slow, straight blows. In a battle fought by mounted warriors, it was much less effective than a saber. However, being heavier than it and capable of striking chopping blows, the sword constituted a threat to warriors wearing chain mail or lamellar armour.

Pole weapons

The Steppe nomads used spears with various types of point⁷. Spearheads with broad, leaf-shaped blades were mainly used to attack enemies with no body defences while long, narrow artifacts square in cross section could pierce chain mail, because their blows broke the rings easily. Spearheads with hooks proved to be especially useful in encounters with mounted warriors⁸. They not only facilitated successful blows but also made it possible for the user to dismount the enemy. The hook could be applied to catch the riders and the legs of their horses. Another advantage was that the hook could be used to prevent deep spearhead penetration, which made it easier for the attacker to remove the blade from the victims body.

⁵ M. V. G o r e l i k, V. V. D o r o f e e v, *Pogrebenye zolotoordinskogo vojna u s. Taborovka*, [in:] *Problemy voyennoy istoriy narodov vostoka*, Leningrad 1990, p. 122; W. Ś w i e t o ś l a w s k i, *Arms and Armour...*, pp. 20-42; V. V. G o r b u n o v, *Voyennoye delo...*, pp. 74-76, fig. 50.

⁶ N. Ya. M e r p e r t, *Iz istoriy oruzhiya plemen vostochnoy Evropiy v rannem srednevekove*, "Sovetskaya Arkheologiya", 1955, XXIII, pp. 160-161; S. K. K a b a n o v, *Pogrebenye vojna v dolinye r. Kashka-Darya*, "Sovetskaya Arkheologiya", 3, 1963, pp. 236-240; Yu. S. K h u d y a k o v, *Vooruzhenye yeniseskikh kirgizov VI-XII vv.*, Novosibirsk 1980, pp. 39-50; Yu. S. K h u d y a k o v, *Vooruzhenye tsentralnoazyatskikh...*, pp. 130-131; W. Ś w i e t o ś l a w s k i, *Arms and Armour...*, pp. 47-50.

⁷ S. V. K i s e l e v, N. Ya. M e r p e r t, *Zheleznye i chugunnye izdeliya Kara-Koruma*, [in:] *Drevnemongolskie goroda*, Moskva 1965, p. 203, fig. 109, 1; A. D a m d i n s u r e n, *Mongolyn zevsgijn tovch tuukh*, Ulaanbaatar 1990, fig. 19; Yu. S. K h u d y a k o v, *Vooruzhenye tsentralnoazyatskikh...*, pp. 133-136; W. Ś w i e t o ś l a w s k i, *Arms and Armour...*, pp. 52-54.

⁸ E. I. D e r e v a n k o, *Ocherki voyennogo dela plemen Priamuriya*, Novosibirsk, 1987, pp. 95-98, fig. 16.

Spears were the most popular type of pole weapon in contemporary Europe. European spearheads were also equipped with heads coming in all shapes and they were often very similar in form to nomadic specimens. Spearheads with hooks were not, however, used in Europe.

A European kind of weapon which was never used by nomadic warriors was the lance. It is hard to say how popular this kind of weapon was in thirteenth century Europe, but lances must have been in use at that time. The lance was long and heavy. This is why it required a specific battle technique. It was not easy to use. Holding the pole under his armpit, the knight directed the leveled lance above the horse's neck and charged at his enemy. The impact of the blow was greater than in the case of a spear. It depended on the weight of the knight and the horse as well as on the speed of the attack. As a result the blow struck with a lance was extremely dangerous if the target was practically immobile, like an infantryman or a knight applying the same battle technique. In the case of mobile Steppe warriors, the lance was not particularly effective.

Shock weapons

In both cultural circles, among the Steppe peoples and West and Central European knights, shock weapons, such as battle axes and maces, were used in battle, though they did not play a decisive role in encounters. Among the various European artifacts, battle axes and maces, were specimens having eastern features, which would suggest adoption of some nomadic forms.

Missile weapons

The bow was the basic kind of nomadic offensive weapon. Made from wood, animal sinew, bone and horn, this relatively small, reflexive bow of medieval Steppe nomads was an excellent missile weapon when used by mounted warriors. Developed over centuries⁹, it was characterized by a long range, provided great accuracy and had a quick rate of fire. The arrowheads came in various shapes and caused severe injuries if the enemy was not wearing body defences. They were also

capable of wounding the horse (some arrowheads had very broad and complex leaf-shaped blades). In addition, narrow and massive arrowheads broke the rings of chain mail. Arrows with whistles attached under the points, used for frightening the enemy's horses and giving battle signals, were very popular with nomadic warriors. Incendiary arrows were applied to set fire to attacked enemy structures. Steppe nomads were taught to use bows as little children. They were masters of this kind of weapon and would apply it not only to fighting but also to hunting and jousting.

In thirteenth century Latin Europe, two types of missile weapon, the bow and the arbalest, were in use. The contemporary European bow, a straight weapon equipped with a long stave made of one piece of wood, was much less frequently used in war but became an important shooting weapon used for hunting. Being very dangerous when used by an infantryman, the bow was hard to handle by a rider. Its size made it practically impossible for a horseman to use it in battle where the mounted warrior had to be very mobile and move fast. Unlike the arrowheads used by Steppe nomads, European arrowheads did not exhibit great variations. The majority of them were affixed by socketing and had flat or slender blades with barbs.

In contemporary Europe, the leading missile weapon used in battle was the arbalest, consisting of a bow fixed transversely on a wooden stock and a trigger to release the bolt. It was feared because of its destructive power, accuracy and long range. The bolt heads, which were long, massive and rhomboidal in shape, were shot with tremendous force and capable of piercing every kind of body defence: chain mail, lamellar or even plate armour. The arbalest was such a dangerous weapon that the Catholic Church frequently forbid its use from the eleventh century onwards but the efforts were futile. The main disadvantage of the arbalest, was its slow rate of fire, especially in encounters with a highly mobile enemy.

Missile-throwing machines of war

Both European armies and Mongol forces had at their disposal missile-throwing machines, which were frequently mentioned in Chinese chronicles¹⁰.

⁹ V. E. S h a v k u n o v, *K voprosu o luke chzhrychzheney*, [in:] *Voyennoe delo drevnego naseleniya Severnoy Azii*, Novosibirsk 1987, pp. 199-205; Yu. S. K h u d y a k o v, *Vooruzhenye yeniseyskikh...*, pp. 66-78; Yu. S. K h u d y a k o v, *Vooruzhenye tsentralnoazyatskikh...*, pp. 99-104; W. Ś w i ę t o s ł a w s k i, *Arms and Armour...*, pp. 58-66.

¹⁰ S. A. S h k o l y a r, *Kitayskaya doognestrelnaya artilleriya*, Moskva 1980 pp. 52, 275, 283; E. I. D e r e v y - a n k o, *Ocherki voyennogo...*, pp. 121-123; W. Ś w i ę t o s ł a w s k i, *Arms and Armour...*, pp. 67-72.

Both the civilizations built machines using the tension of some elastic materials, such as wooden poles, and constructed engines worked by counterpoise. Although major structural differences could be observed, the missiles hurled by means of such machines were basically the same: stones, wood logs, and even the flesh of dead animals. The capacity of such engines was also roughly the same. The average missile weighted several dozen kilograms and could be thrown hundreds of metres away. The main difference lied in the fact that the nomads used missiles containing explosives and incendiary powder mixtures, which were unknown in contemporary Europe. It should also be noted that the Steppe warriors were skilled at using missile-throwing machines not only during sieges of fortified places but also to attack the enemy. For instance, according to Thomas of Split, during their thirteenth century campaign in Central Europe, before the Battle of Mohi, the Mongol invaders attacked and destroyed the Hungarian advance guards, which allowed them to attack the main forces¹¹.

Powder weapons and poison gases

The late medieval nomads of the Steppe were familiar with and applied projectiles filled with explosives and incendiary powder mixtures containing, among other things, smoke powder. They were also familiar with poison gases, which were successfully used, for example in the Battle of Legnica¹². However, neither poison gases nor gunpowder was known in thirteenth century Europe. This is the reason why the European knights taking part in that battle were so astonished at their application. Two centuries after that incident, the chronicler describing the Poles' encounter with the Tartars was still impressed by the invaders' ingenuity¹³.

Horse harness, saddles and horse armour

All the basic parts of medieval European horse harness and armour, including the high, stiff saddle with pommels, the stirrups and the bit had originated in the Far East, Asia¹⁴. They were introduced into Europe through the Steppe people at the beginning of the Middle Ages and were creatively improved. European knights adjusted the equipment to their own needs connected with their specific technique of horse riding as well as the arms and way of fighting used on their territory. As a result, new forms evolved. They not only differed in shape from the original parts but were made using new technologies and had a wide range of applications on the battlefield. They had, however, similar functional advantages. The European saddle, though, was a part of horse armour quite different from the saddle used by the thirteenth century Steppe people. The device imported from the Far East was gradually adapted and, at the end of the early Middle Ages, a new type of saddle emerged in Latin Europe. The European knightly saddle had very high, vertically affixed pommels. The hindommel was specially shaped so that it surrounded the rider's hips. Such saddles were frequently covered with sheet metal, which protected the horseman's stomach. The emergence of this type of saddle was undoubtedly connected with the introduction of the lance and consequently with the use of new, specific fighting techniques. Saddles of this type gave the rider tremendous shock potential. The knight sat firmly on horseback and it was difficult to unhorse him. The main disadvantage of such a saddle was that it restricted the rider's freedom of movement as well as his reach. In addition, the use of high saddles resulted in a specific way of mounting. The stirrups hung from the saddle attached to long stirrup leathers. The rider had to stretch his legs towards the front, which made it easier for the him to remain in the saddle after thrusting his lance at the opponent, but on the other hand, rendered

¹¹ Tomasz ze Spalato, [in:] *Der Mongolensturm. Berichte und Augenzeugen und Zeitgenossen 1235-1250*, translated and ed. H. Göckenjan und J. R. Sweeney, Graz-Wien-Köln 1985, p. 241.

¹² A. Damsuren, *Mongolyn zevsgijn...*, pp. 109-111; S. Sulc, *Armia mongolska w świetle trzynastowiecznych źródeł japońskich [The Mongol Army in the Light of Early Medieval Japanese Records]*, "Roczniki Historyczne", 1988, LIV, p. 108; W. Świątosławski, *Arms and Armour...*, pp. 79-80; W. Świątosławski, *Boyeve gazy v voyennom dele tataro-mongolov*, „Memoires of the Oriental Department of the Russian Archaeological Society”, Sankt Peterburg 2002, vol. 1 (XXVI), pp. 373-379.

¹³ Ioannis Dlugossii, *Annales seu cronicae incliti regni Poloniae*, lib. VII, VIII, Warszawa 1975, p. 22.

¹⁴ S. I. Vaynsheyn, *Mir kochevnikov tsentra Azvi*, Moskva 1991, pp. 220-221; A. Ito, *Zur Chronologie der frühsillazeitlichen Gräber in Südkorea*, München 1971, fig. 57; W. Świątosławski, *Die Elemente der fernöstlichen Bewaffnung im frühmittelalterlichen West- und Mitteleuropa*, [in:] *Actes du XII^e Congres International des Sciences Préhistoriques et Protohistoriques*, Bratislava, 1-7 Septembre 1991, Bratislava 1993, 4, pp. 282-284; W. Świątosławski, *Arms and Armour...*, pp. 81-90.

him unable to control the horse by means of his legs. Moreover, while charging at his enemy, the knight, holding a shield in one hand and a lance in the other, was unable to control the horse with his hands either. As a result, he had difficulty controlling the horse, rushing forward. This disadvantage of using high saddles was particularly unfortunate if the enemy was characterized by fast movements, which was the case with nomadic horsemen.

The saddle used by the Steppe peoples evolved in a different way. They made hard, war saddles from two benches lying on a horse's back and two pommels, which in contrast to the European construction, did not surround the rider's hips, but the hind pommel got almost flat towards the horse's back¹⁵. This technique allowed the rider to move freely, for example to shoot arrows backwards while the horse kept moving. Thanks to this invention, the nomads were able to use very effective tactics: They would feign flight forcing the enemy lines to spread and divide while shooting hundreds of arrows at them.

A characteristic quality of nomadic saddles was suspending the stirrups by very short leathers. As a result, the stirrups hung very high resembling modern stirrups used in horse racing. This way of mounting allows the rider to control the horse by means of the legs and use both his hands freely.

A major difference consisted in the use of horse armour by the nomads¹⁶. The armour was made from iron lamellae or toughened leather and it frequently covered the whole bodies, necks and heads of horses belonging to prominent warriors. Although it must have hindered the animal's movements reducing its speed and mobility, horse armour prevented the warrior from losing the

horse, which was absolutely indispensable in battle. Despite the fact that from the thirteenth century onwards, Polish knights started to use the so-called *housing*, it did not prove to be an effective protection. The housing was in fact an ornamental textile, more suitable for parades than for war. Therefore a knight's horse was not sufficiently protected and it could be wounded easily with arrows and thus eliminated from battle. Steppe warriors would frequently attack horses and they even had at their disposal a special kind of arrow used for this purpose.

Equestrian equipment

The above-mentioned differences in the way of controlling the horse affected the forms of equestrian equipment used by both civilizations. The nomads applied whips to urge their horses¹⁷. They had leather loops around their wrists and after using the whip, the warrior simply let it hang loosely and could use both his hands freely to work his weapons. Contemporary European knights wore spurs, which were unknown to the Steppe peoples. During the thirteenth century, a significant change occurred in the shape of this accessory. The sharp spike which was used to urge the horse in the early Middle Ages was replaced by a star-shaped ring, which did not hurt the horse's flanks so much. Spurs had two principal disadvantages: They injured the horse, which was additionally exhausted by fighting on the battlefield, and they were less effective if the horse was covered with a housing.

Conclusion

In order to sum up the above remarks regarding particular kinds of arms and armour, equestrian accessories, horse harness and armour, the most significant differences have been presented in the table below.

Keeping in mind that assessment of the functionality of military accessories is extremely relative and affected by numerous factors, it has

¹⁵ S. A. Pletneva, *Drevnosti chernykh klobukov*, [in:] *Arkheologiya SSSR. Svod Arkheologicheskikh Istochnikov*, Moskva 1973, figs. 7, 35; D. G. Savinov, *Iz istoriy ubranstva verkhovogo konya u narodov Yuzhnoy Sibiri (II tysyacheletye n.e.)*, "Sovetskaya Etnografiya", 1977, No. 1, pp. 31-48; I. L. Kyzlasov, *Askizskaya kultura Yuzhnoy Sibiri X-XIV vv.*, [in:] *Arkheologiya SSSR. Svod Arkheologicheskikh Istochnikov*, Moskva 1983, p. 37, fig. 18; E. V. Kovychev, *Istoriya Zabaykalya (I-ser. II tys. n.e.)*, Irkutsk 1984, p. 50, fig. 16; M. L. Shvetsov, *Pozdnekochevnicheskoye pogrebeniye u s. Smeloye na Severskom Donce*, "Sovetskaya Arkheologiya", 1984, No. 1, pp. 264-271.

¹⁶ M. V. Gorelik, *Ranniy mongolskiy ...*, p. 202; W. Świętosłowski, *Arms and Armour...*, pp. 91-94; V. V. Gorbunov, *Voyennoye delo...*, pp. 77-89, figs. 51-57.

¹⁷ A. P. Borodovskiy, *Pleti i steki v ekipirovke rannesrednevekovogo vsadnika yuga zapadnoy Sibiri*, [in:] *Voyennoye delo naseleniya yuga Sibiri i Dalnego Vostoka*, Novosibirsk 1993, p. 179; W. Świętosłowski, *Arms and Armour...*, pp. 95-96.

been assumed that only the most significant aspects regarding the application of particular fighting techniques will be taken into consideration. The main characteristics of these tactics were the rate of maneuvers and their diversity: Spreading and dividing the enemy lines by feigning flight, flanking the enemy on both sides, attacking the rear lines, launching a massive attack before the direct encounter by means of bows and missile-throwing machines as well as the use of powder and gas weapons unknown to the enemy. Undoubtedly, the above tactics were typical of the Steppe warriors. They were successfully applied during the campaign of 1241-1242 in Central Europe. Contemporary knights, who were supposed to defeat the invaders, were accustomed to a different mode of combat and failed to impose their style of fighting on the enemy, which undoubtedly was one of the causes of their numerous defeats.

The above analysis clearly suggests that the military accessories applied by the Steppe nomads were superior to those used in contemporary Europe. Nomadic warriors invading Central Europe in the thirteenth century and forcing the attacked to adopt their way of fighting had at their disposal a set of weapons allowing them to get the best of each battle. The arms and armour which were extremely effective in wars fought between armies using knightly tactics and which had developed in conditions different from the nomads' world did not prove useful in encounters with an enemy armed with totally different weapons, using completely different tactics.

Consequently, the efforts of the Polish, Hungarian, Czech and German knights, who ready to defend their territory against the invasion launched by the Steppe nomads faced the enemy in 1241, were doomed to failure.

Translated by Zuzanna Poklewska-Parra

| Latin European knights | | | Steppe warriors | | |
|------------------------------|--|--|--|--|--|
| advantages | disadvantages | selected kinds of arms | | advantages | disadvantages |
| flexibility | inadequate protection against arrowheads | chain mail | lamellar armour | flexibility, adequate protection against arrowheads | possibility of breaking up as a result of a blow |
| | heavy, restricting the knight's movements and visibility, not resistant to blows | great helms | – | | |
| | heavy, restricting the knight's movements, particularly in combat on horseback | swords | sabers | light, free movements, handy in combat on horseback | |
| | no hooks | spears | spears | hooks used for unhorsing the enemy and catching the horse's legs | |
| chance to strike a hard blow | only one fighting technique | lances | – | | |
| | large, inconvenient to use in combat on horseback | bows | bows | great piercing force, quick rate of fire, can be used on horseback | |
| great piercing force | slow rate of fire | arbalets | – | | |
| | inconvenient to use on the open battlefield | missile-throwing machines | missile-throwing machines | convenient to use also on the open battlefield | |
| | | – | powder weapons and gases | astonishing and scaring the enemy | |
| secure mounting | restricted freedom of movement | horse armour with a high saddle and pommels surrounding the rider's hips | horse armour with rear pommels bent towards the back | full freedom of movement, ability to shoot arrows backwards | |
| | hurting the horse, not to be used on a horse in armour | spurs | whips | safe for the horse, to be used on a horse in armour | |