TADEUSZ GRABARCZYK, OLGIERD ŁAWRYNOWICZ

FALCHION AND ITS TECHNOLOGY IN POLAND (14TH-16TH CENTURIES)

The falchion (Polish *kord* or *tasak*) is a single-edged weapon with straight or slightly curved blade, used in Poland since the 13th century. In the article we would like to concentrate on the 14th to 16th-century Polish Kingdom at the change borders over this period range.

In the Polish literature concerning weapon studies literature falchions had been adopted to divide into two types of weapons: kord and tasak¹. The kord is resembling enlarged knife, with straight or slightly curved blade and asymmetrical hilt, which has laterally riveted facing. It is widely accepted that the knives are weapons whose overall length exceeds 40 cm². The kords from the lands of the Polish Kingdom have not yet been fully developed. There is still actual the scheme of M. Głosek, who had divided falchions with knife shaped hilt into four groups, on the base of observation of archaeological sources³. The collected material was also divided by him into four types of hilts⁴. In the case of *tasaks*, i.e. falchions with symmetric hilt, which in Polish collections so far are only few, the author saw regularity that blades are usually longer, and that sometimes extend toward the stabbing. While falchions with knife shaped hilt were used to cut, but sometimes also to the stabbing, in the case of falchions with symmetrical hilt the cutting function is more straightforward⁵. With the publication of the following artifacts, it turned out that this scheme has loopholes, does not include, for example, the long arms with knife-shaped hilt and typical sword blade⁶. Such artifacts do not take into account also other European typologies, for example that of H. Seitz⁷. There are borrowed the typologies of other weapons, as is the case with falchions with symmetrical hilt, where the analysis successfully uses the typology of sword cross-guards by E. Oak shott⁸. It would be desirable to develop a new scheme that takes into account falchions from the whole area of Europe.

Unlike the swords, studies about falchions from areas of the Polish Kingdom have been limited so far to synthetic approaches in publications and unpublished works of masters, which have more collogue character than research⁹. Among 13 falchions from the area of contemporary Poland compiled by S. Cieluch in 2000 published before, only 6 can be associated with out major doubts with lands of the Polish

¹ See, e.g. Ż. Żygulski (jun.), *Broń w dawnej Polsce na tle Europy i Bliskiego Wschodu*, Warszawa 1982, p. 49; A. Nadolski, *Polska broń. Broń biała*, Wrocław 1984, pp. 71-72; M. Gradowski, Z. Żygulski (jun.), *Słownik uzbrojenia historycznego*, Warszawa 2000, pp. 26-27, 39-40.

² M. Lewandowski, *Puginały średniowieczne z ziem polskich*, [in:] *Mediaevalia Archaeologica*, ed. A. Nadolski, "Acta Archaeologica Lodziensia", Vol. 31, 1986, p. 104.

³ These are blades: 1. The simple back and edge, evenly tapering towards point; blade is like in knife; 2. The simple back and almost parallel to 4/5 the length of the blade, sharply tapering to a very low formed point; 3. The simple back and expanding on 4/5 the length of the blade, sharply tapering to a very low formed point; 4. The curved back and edge like in sabre, sometimes with the aslant truncated back in the engravings; M. Głosek, *Broń biała długa*, [in:] *Uzbrojenie w Polsce średniowiecznej 1350-1450*, ed. A. Nadolski, Łódź 1990, p. 123.

⁴ These are hilts: 1 Without cross-guard and pommel; 2 A short cross-guard and asymmetric pommel; 3 With a long cross-guard inclined both to sides to the blade; 4 With a crossguard of the front arm curled upwards and asymmetric pommel; *Ibidem*.

⁵ Artifacts from Silesia, which from the half of 14th century subjected to the Kingdom of Bohemia, came a large representation of falchions, that were collected and developed by L. Marek. This researcher shared falchions with knife-shaped hilt for specimens with a cup-like pommel and with high pommel. The cup-like pommel falchions have 2 types of blades (I, II) and 3 types of pommels (A, B, C). In the case of high pommel falchions researcher may set 3 types of blade (III, IV, V) and 3 types of pommels (D, E, F). Because the modest archaeological material for the falchions with symmetric hilt from Silesia, creating a taxonomy had become impossible; L. Marek, *Broń biała na Śląsku XIV-XVI wiek*, Wratislavia Antiqua, Vol. 10, Wrocław 2008, pp. 38-41, 45-64; See also L. Marek, *Średniowieczne i nowożytne kordy ze* Śląska, "Acta Militaria Mediaevalia", Vol. 2, 2006, pp. 189-206.

⁶ L. Marek, *Broń biała...*, p. 45-46, 49; por. M. Głosek, *Interesujący zabytek broni białej z Poręby Wielkiej*, "Rocznik Sądecki", Vol. 20, 1992, pp. 35-40; G. Teske, *Późnośredniowieczna broń biała ze Zborowa koło Kalisza*, "Rocznik Kaliski", Vol. 29, 2003, pp. 237-242.

⁷ H. Seitz, *Blankwaffen*, Vol. 1, Braunschweig 1965.

⁸ E. Oakeshott, *Records of Medieval Sword*, Wooodbridge 1991.

⁹ P. Gajda, Kordy i tasaki w zbiorach polskich (z okresu średniowiecza i początków XVI wieku), Łódź 1986 (in the archive of Institute of Archaeology, University of Łódź); P. Celuch, Średniowieczne kordy i tasaki z ziem polskich, Toruń 2000 (in the archive of Institute of Archaeology, University of Nicolaus Copernicus in Toruń).

Kingdom, because some of them come from outside of its borders or do not have a specific place of origin. In the case of a falchion with symmetrical hilt on the 6 artifacts 3 may be linked to the Polish Kingdom¹⁰. It is therefore necessary to query the museum and archives, which should bring the place of origin of certain artifacts and bring to light artifacts forgotten or discovered in the course of a number of studies, particularly in the medieval city, which took place in recent years. In areas neighbouring Silesia such studies led to the statement of 28 local falchions and 7 of unspecified place of origin. In the case of a falchion with symmetrical hilt so far no artifact is known, which could be localized in the area of Silesia¹¹. Much attention was paid to iconographic representations of falchions that are mostly portrayed in gothic art in the hands of torturers in scenes of passion, acting as a weapon or as an mocking non-Christian forces (Tartar) in the historic battle scenes or as a attribute of saints (Fig. 1-2)¹². It is particularly controversial in this context the falchion on the tombstone of King Władysław Łokietek, that appears as a result of hearted conservation treatments in the 19th century¹³. The exceptional importance in Polish culture has to be attributed to the falchion stored in the cathedral of Poznan. This weapon is called the "sword of Saint Peter". According to a legend, the Apostle was used it to cut off the ear of Malchus, the priestly servant. In fact, the weapon was brought from the Holy See in Avignon about half of the 14th century, and it was performed at the beginning of this century¹⁴.

Despite the lack of development of new synthetic publications of Polish falchions, there have been published or earlier unpublished newly artifacts, such as the falchions of Zborów near Kalisz, Rawa Mazowiecka and city of Warta in Central Poland or artifacts which combine features of dagger and falchion from Grochowalsk near Włocławek in the historical Dobrzyń Land and from Bielica near Elblag from the area of historical Royal Prussia¹⁵. The artifacts of Bielica and Warta

¹⁴ M. Głosek, L. Kajzer, *Miecz św. Piotra z katedry poznańskiej*, "Kwartalnik Historii Kultury Materialnej", Vol. 22, 1974, pp. 233-241; A. Nadolski, *Polska broń...*, p. 72; M. Głosek, *Broń biała długa...*, p. 122; J. Szymczak, *Broń biała w dziełach Jana Długosza*, [in:] *Non sensistis gladios. Studia ofiarowane Marianowi Głoskowi w 70. rocznicę urodzin*, eds O. Ławrynowicz, J. Maik, P.A. Nowakowski, Łódź 2011, p. 421; M. Głosek, *Jeszcze raz o tzw. mieczu św. Piotra z archikatedry poznańskiej*, "Ecclesia. Studia z dziejów Wielkopolski", Vol. 6, 2011, pp. 69-76.

¹⁵ G. Teske, op. cit., M.I. Spannbauer, P. Strzyż, Militaria średniowieczne z badań archeologicznych na terenie zamku w Rawie Mazowieckiej, "Acta Militaria Mediaevalia", Vol. 5, 2009, pp. 148-149; O. Ławrynowicz, O zapomnianym puginale z Grochowalska, "Acta Militaria Mediaevalia", Vol. 6, 2010,



Fig. 1. Saint Bartholomew the Apostle (or Saint John the Apsotle) with the falchion in the triptych of Tuchów in Lesser Poland (1460-1470); J. Gadomski, *Malarstwo tablicowe – Małopolska*, [in:] *Malarstwo gotyckie w Polsce*, Vol. 3, *Album ilustracji*, ada A. Labuda K. Sacameka, Warszawa 2004, fag. 456

eds. A. Labuda. K. Secomska, Warszawa 2004, fig. 456.

¹⁰ *Ibidem*, p. 60-66.

¹¹ L. Marek, *Broń biała...*, pp. 38, 155-156.

¹² Eg. Z. Żygulski (jun.), *Broń*..., p. 145-146.

¹³ L. Kajzer, Uzbrojenie i ubiór rycerski w średniowiecznej Małopolsce w świetle źródeł ikonograficznych, Wrocław 1976, p. 70; A. Nadolski, Polska broń..., p. 72; M. Głosek, Broń biała długa..., p. 122.

pp. 253-262; O. Ławrynowicz, P. Pudło, *Nóż bojowy czy kord? Kilka uwag na temat zabytku z Bielicy, pow. elbląski*, "Rocznik Elbląski", Vol. 23, 2010, pp. 47-54, O. Ławrynowicz, M. Rychter, *Ile wart jest kord z Warty?*, "Acta Militaria Mediaevalia", Vol. 8, 2012, pp. 253-271; in the development of O. Ławrynowicz i P. Strzyż is also an unpublished falchion from Włocławek.

are of few falchions, which have been subjected to metallographic examinations¹⁶. In the case of the falchion of Warta the expertise was made of preserved wooden cladding of grip.

The specification of falchions with knife-shaped hilt and symmetrical hilt, outlined above, although has some technical justification, has no reference in the Polish medieval written sources, in which the words *kord* and *tasak* are interchangeable in 16th century, us suggesting that these terms refer to the same weapon. In the nearby Czech Lands, both types of weapons are referred to the word *tesák*¹⁷.

The oldest mentioned falchion in the Polish sources is a record of 1297: *gladium vel cultellum quod vulgariter dicitur kord*¹⁸. The written sources of this weapon is the latin terms *longum cultellum, magnum cultellum, cultellum cord, cultellum alias kord magnum*¹⁹. The latter term accurately reflects knife shape of the most of falchions with straight back and the blade, evenly tapering towards the stabbing²⁰. Perhaps, however, the term "long knife" or "big knife" was applied only to the characteristic of the blade and the falchion with asymmetric hilt and stem with riveted linings. We can also believe that sometimes just word *cultellus* not specifying a standard knife, but just the falchion. In Polish sources one can finding also common terms: *korth, kordzik*, and from the 16th century also *thesak*²¹.

It is assumed that falchions in the late medieval written sources can also hide under the name *framea*, so the same which was used for saber²². The fact that the same term can mean different types of weapons impedes an unambiguous interpretation encountered in the source records. Using in

¹⁸ Kodeks dyplomatyczny Wielkopolski, ed. I. Zakrzewski, Vol. 1, Poznań 1887, No. 478.

¹⁹ Akta grodzkie i ziemskie, Vol. 12, No. 344 (1438). Pomniki (wypisy) z ksiąg dawnych sądowych ziemskich i grodzkich ziemi krakowskiej, ed. A. Z. Helcel, Kraków 1870, [in:] Starodawne prawa polskiego pomniki (further: SPPP), Vol. 2, No. 2462.

²⁰ Głosek, Broń biała długa..., p. 123.

²¹ In addition to the mentions talking about *tasak* quoted in later part of the article, it is worth to notice that in 1523, which recorded *gladium parvum alias thessak* J. Szymczak, *Organizacja produkcji i koszty uzbrojenia*, [in:] *Uzbrojenie w Polsce średniowiecznej 1350-1450*, ed. A. Nadolski, Łódź 1990, p. 265.

²² Mention of 1537: framee alias thesaky, J. Szymczak, Produkcja i koszty uzbrojenia rycerskiego w Polsce XIII-XV w., Łódź 1989, p. 71.



Fig. 2. Roman soldier with falchion in the scene Jesus falls under the Cross in the polyptych of Szydłowiec in Lesser Poland (1507-1510); J. Gadomski, op. cit., fig. 634.

the Middle Ages the same name – *framea* for falchion and saber can be explained by the similarity of the blade shape of both types of weapons. The iconographic sources show the falchions with curved back and a blade in the type of sword, sometimes with the back truncated aslant in the part of stabbing. The term *framea* could therefore also refer to a sword-like weapon with curved blade and symmetric hilt, currently classified as falchions with symmetric hilt (Polish *tasak*). The defining is a yelmen (Polish *pióro*), which did not have the falchions²³. To the late Middle Ages, when the sword only entered in widespread use in Poland, such a distinction had not been obvious.

The falchions do not appear in the documents setting out the equipment and the size of the fellowship, to the knight had to attend during the mobilization to a war (*expeditio generalis*). This should not be interpreted as the evidence of absence of weapons in the armed forces which were appointed to serve in the campaign. This is due to the fact that the documents describing the service dimension generally omitted edge weapons²⁴.

¹⁶ See also the metalographic examination of falchion from Witków in Silesia: L. Marek, A. Michalak, *Głowica kordu z wieży rycerskiej w Witkowie*, [in:] *Ad Oderam fluvium. Księga dedykowana pamięci Edwarda Dąbrowskiego*, ed. B. Gruszka, Zielona Góra 2008, p. 467-485.

¹⁷ V. Brych, Středověký tesák z tvrze Martinic a problémy studia krátkých jednobřitých zbraní, "Castellologica bohemica", Vol. 4, 1994, p. 257. See also works of P. Žákovský: Tesáky ze sbírek Státního hradu Zvíkova, "Castellologica bohemica", Vol. 11, 2009, pp. 461-472; Idem, Tesáky s prořezávanými záštitnými trny z moravských sbírek, "Archeologické rozhledy", Vol. 93, 2011, pp. 501-516; Tesáky s člunkovitými záštitami a jejich postavení ve vývoji chladných zbraní, "Archaeologia historica", Vol. 37, 2012, pp. 691-732.

²³ M. Głosek, *Broń biała*, [in:] *Uzbrojenie w Polsce średniowiecznej 1450-1500*, ed. A. Nowakowski, Toruń 1998, p. 37.

²⁴ There was found only the mention of one sword, A. Nadolski, J. Dankowa, *Uwagi o składzie i uzbrojeniu polskiej jazdy*

In examining the equipment on the Polish territory in the Middle Ages it is often in use the information from the area of Silesia and the Teutonic Order State. In the case of falchions it is impossible because there are no descriptions of weapons of this type from the Silesian region. Most likely, this type of weapons hidden under the generic name $swert^{25}$.

A similar situation is in the case of the Teutonic Order, where falchions in written sources practically do not-exist. The exception is the regulation prohibiting burghers wearing the *lange messir* on the streets²⁶.

Relatively little is known about the production of falchions, both in terms of the organization of production and the technology of their perform. As to the first point, the written sources say that in the production of them were involved knife or sword producers. Between these two groups there were often conflicts related to the competence²⁷. The sixteenth century provincial controlled price lists (Polish *taksy wojewodzińskie*) were concerned only with the sword producers of falchions. So, it can be assumed that they won the competition. Quality of falchions from sword producers was high. This manufacturing was directed towards the needs of affluent nobility and bourgeoisie. The falchions from knife producers were most probably a part of more mass-produced cheaper goods, intended to meet a less wealthy clientele.

An indicator of the falchions diversity can be their prices. From the end of 1396 it comes the oldest known mention giving the price of a falchion. Miczko Sarnowski committed by county court (Polish *sqd grodzki*) in Łęczyca that he need to return the borrowed saddle, a crossbow and *cultellum* to Stanimir of Kaniow, mayor of Wieluń, within two weeks. However, if these items Miczko would kept, he had to pay for them: 40 grosses for a crossbow, 36 grosses for a saddle and 7 grosses for a *cultellum*²⁸. Both the context of information: rent a knighthood equipment and the price that was reported for edge weapon suggests that in this case the term *cultellum* means rather falchion than the ordinary knife.

Next record concerning cost of falchion comes from the 1432. When Maciej, the knife producer from Sieradz

sent magno cultello dicto cord for 8 grosses²⁹. We learn from the Mazovia judicial record that in 1469 took place the court dispute over falchion, which was priced together with a belt at 17.5 grosses³⁰. For comparison, it is worth quoting the information from the lists of Bohemian mercenary losses in the service of Wilhelm, Duke of Saxony, from the 40. of the 15th century. They show that for lost lalchion (Messer) soldiers usually paid 10 to 24 grosses of compensation³¹. We know as well several references from the 70s and 80. of 15th century with prices 8-10 cents for a cord (see below). Among the 15th-century references containing the price of falchions the 1428 stands out. It shows that Mikołaj of Gromnik sued in the courts Martin de Crassiow accusing him of looting a number of valuable items, among which was a falchion (cultello), with value specified for 2 pounds (96 grosses)³². It is difficult to say whether such a value of weapon was due to its quality and above-standard finishes. or rather was the result of excessive claims of victims.

Much more information about prices of falchions are brought from the sources of the 16th century. The first of these is mentioned in 1523, the theft of items, among which was the falchion priced up to 60 grosses³³. A lot of falchion prices contain provincial controlled price lists from this period³⁴. The price list for the city Ksiaż in Lesser Poland, issued in 1538 reported falchion with a simple cross-guard for 11 grosses and falchion called "sądecki" for 9 grosses³⁵. The controlled prices for the provinces of Kalisz in 1553, Brześć Kujawski in the years 1555 and 1565, Krakow in 1561 and 1565 for falchion with a simple hilt give the same price of 12 grosses. The price list in Krakow from 1589 bearing 20 grosses for the falchion. The falchion "sądecki" according to the price list: Kalisz in 1553 and Brześć Kujawski in 1555 expected the price of 10 grosses, while in the price list of Kraków from 1561 the same arm bears 9 grosses.

³⁴ Taksy wojewodzińskie – the official provincial price lists of products. They were introduced in the 15th century on the initiative of the nobility in order to control the prices of the products manufactured in the cities; *Encyklopedia historii gospodarczej Polski do 1945 roku*, Vol. 2, Warszawa 1981, p. 379.

³⁵ Cennik wydany dla rzemieślników miasta Książa przez Piotra Kmitę, wojewodę krakowskiego w r. 1538, ed. B. Ulanowski, "Sprawozdania Komisyi Językowej Akademii Umiejętności", Vol. 3, 1884, p. 358. Książ – today Książ Wielki circa 45 km to the North from Kraków. Term "sądecki" came probably from the name of city Nowy Sącz in Lesser Poland, situated 75 km South-East from Kraków.

rycerskiej w latach 1350-1450, "Studia i Materiały do Historii Wojskowości", Vol. 26, 1983, p. 102.

²⁵ M. Goliński, *Uzbrojenie mieszczańskie na Śląsku od polowy XIV do końca XV w.*, "Studia i Materiały do Historii Wojskowości", Vol. 33, 1990, p. 24.

²⁶ A. Nowakowski, Arms and armour in the Teutonic Order's State in Prussia, Łódź 1994, p. 90.

²⁷ More about jurisdictional disputes between sword and knife producers in: J. Szymczak, *Organizacja...*, p. 262-263; A. Bołdyrew, *Produkcja i koszty uzbrojenia w Polsce XVI wieku*, Warszawa 2005, p. 61-64.

²⁸ Księgi sądowe łęczyckie od 1385 do 1419, Part 2, [in:] Teki A. Pawińskiego, Vol. 4, Warszawa 1897, No. 5443; T. Grabarczyk, T. Nowak, *Wójtowie i wójtostwo wieluńskie (XIII-XVI w.)*, "Rocznik Wieluński", Vol. 6, 2006, p. 19.

²⁹ J. Szymczak, Organizacja..., p. 360, annotation. 479.

³⁰ Zapiski i roty polskie XV-XVI wieku z ksiąg sądowych ziemi warszawskiej, eds W. Kuraszkiewicz, A. Wolff, Kraków 1950, No. 1320.

³¹ The exception was the falchion for 4 dozens grosses; U. Tresp, *Söldner aus Böhmen: im Dienst deutscher Fürsten: Kriegsgeschäft und Heeresorganisation im 15. Jahrhundert*, Paderborn 2004, p. 383.

³² SPPP, Vol. 2, No. 1, p. 82

³³ Zapiski..., No. 2296.

The provincial controlled price lists contain not only the prices for all the falchions but also information of repair cost. Mostly the price for repairing or finishing³⁶ of falchion estimated between 3 and 5.5 grosses in the case of a simple peasant weapon (*broń gburska*), without cross-guard and 6-7 grosses for falchions with cross-guard and pommel. Higher costs of this kind of work was expected in the controlled price lists of 1589, according to which 8 grosses had to be charged for renovation or finishing of falchion without cross-guard, and 10 for the renovation of such a weapon with a scabbard³⁷. The sources from the 16th century clearly show the presence of the falchions with knife or sword hilt (cross-guard and pommel).

The information contained in the provincial controlled price lists refer to standard types of falchions, not distinguished by something in particular. However, there were specimens, finished exclusively. An example of such a weapon was falchion listed in the source of 1571, among the items that left by Jan Gajewski after his death. There was a *falchion with silver and gold-plated, which silver was 22 scots (kord ze srebrem pozlocisty, na którym srebra szkojcy 22)*. In the registry of goods of deceased John Złotkowski of 1580 has been mentioned *little falchion with silver hilt (kordek srebrem oprawny)*³⁸.

The quoted prices suggest wide variety of falchions in the quality of materials and workmanship. One should, however, take into account the role of factors such as supply and demand, inflation, the size and quality of the blade, as well as finishing of the hilt.

Split between cheaper and more expensive falchions is also perceptible in the archaeological material. In addition to the general regularity, according to which the longer specimens were more expensive and shorter cheaper, we can see features such as raw material quality, precision and decorative elements. Let us look at two relatively well-studied artifacts in this regard: from Bielica (today in Pomeranian Voivodeship) and Warta (today in Lodz Voivodeship)³⁹. The weapon of Bielica is basically a long dagger, as its total length is 38 cm (Fig. 3-5). Originally it was a few centimeters longer, so it is also regarded as an example of a short falchion with a knife hilt. Perhaps such a weapon in an old Polish was determined by term *kordzik*, which is known from the medieval written sources. The artifact was surveyed by X-ray, which showed the existence of two elements forming the blade. Probably the hilt with the larger part of the blade was made of a single scrap of iron. However, separately prepared overlay of blade which were then anastomosed to the rest of the blade. It is visible on RTG that the fusion line of these two elements can approximate the width of the edge, which is one third of the width of the entire blade.

The existence of two different components of the blade also confirmed analyze of the percentage content of carbon in steel of blade. For analysis two samples were used: one from the edge and the other from the back part of the blade. The analysis shows that the carbon content of the blade was 0.85%, while on the back of the blade 0,57%. It is worth mentioning that the value of 0.85% C is characteristic of high-carbon steel⁴⁰, which was characterized by very high hardness and the loss of flexibility. Much more flexible was medium-carbon steel, which made the rest of the blade⁴¹. We can conclude that the person performing the object was perfectly aware of the property needed for the blade used for the combat. The analysis showed that to produce the weapon of Bielica it was necessary not only a knowledge of blacksmithing, but also a satisfactory understanding of mechanical properties of the blade elements.

Another example is the falchion of Warta (Fig. 6). The most characteristic feature of the artifact is the blade of height 70 mm and thickness 18 mm. Its sides, corresponding to the edge and back are slightly rounded. It was applied to the conical end of the shaft of hilt, with cross section being the circle of diameter 8 mm, shown on the top plane. This was confirmed by an X-ray survey, showing the end of shaft passing through the pommel, which in similar way to rivet was formed on the surface of the pommel. On the right side of the pommel an encrusted cross of copper alloy is located, which measures in vertical line 36 mm and horizontal 27 mm, except that it probably was prolonged to the left side to 36 mm, as evidenced by visible groove in the extension of the left arm of the cross. It would be therefore asymmetric cross whose left arm had 23 mm and right 13 mm. Encrusting thickness is 2 mm.

The decorative elements of the falchion made of copper alloys also were tested for elemental composition. There were taken small samples of metal from the decorations in the form of a cross, as well as from a decorative cover with thickness of 12 mm, crowning the top of both

³⁶ Term "finishing" means the attaching a pommel, an across-guard, the wooden cladding of grip and perhaps sharpening the blade.

³⁷ Słownik polszczyzny XVI wieku, Vol. 7, Wrocław 1973, p. 228; Cz. Jarnuszkiewicz, *Broń w dawnych inwentarzach*, "Barwa i Broń", Vol. 1, No. 2, 1934, p. 20; idem, *Dawne taryfy cen dla mieczników*, "Barwa i Broń", Vol. 6, No 5-6, 1939; A. Bołdyrew, *Produkcja...*, p. 75-76.

³⁸ 1 scotus (Polish: skojec) = 1/24 of silver marc = about 9 gram of silver. A. Wyczański, *Szlacheckie inwentarze pośmiertne z XVI w. jako źródło do dziejów kultury mieszczańskiej w Polsce*, "Kwartalnik Historii Kultury Materialnej", Vol. 2, No. 4, 1954, pp. 696, 697; See: A. Bołdyrew, *Produkcja...*, p. 75; there is a mistake and: *falchion srebrem pozłocisty* is listed in the inventory of Klemens Świecki from 1571.

³⁹ Full development of these artifacts in the articles: O. Ławrynowicz, P. Pudło, *Puginal czy kord?...*; O. Ławrynowicz, R. Rychter, *Ile wart jest kord z Warty?....*

⁴⁰ P. Rudnik, *Metaloznawstwo*, Warszawa 1994, p. 164.

⁴¹ *Ibidem*, p. 164.

TADEUSZ GRABARCZYK, OLGIERD ŁAWRYNOWICZ

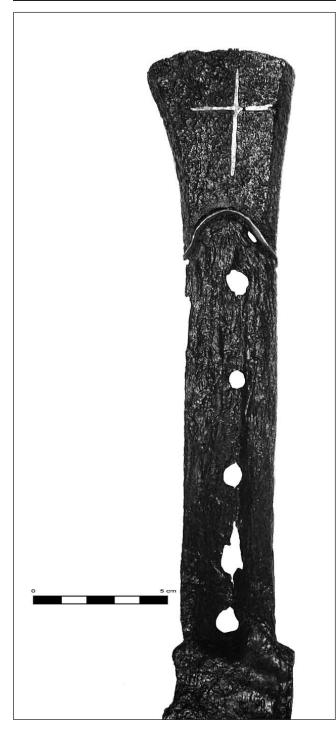


Fig. 3. Grip of falchion from Warta without wooden claddings after the conservation; *Photo O. Lawrynowicz*.

sides of wooden cladding of grip. These analyzes showed that the metal used in the manufacture of these parts was brass, and the alloy of cross decoration at the pommel was contaminated with lead which would indicate that the two fragments of decoration are not made of metal coming from one crucible.

These observations are complemented by metallographic examinations of the hilt and the blade. The X-ray analyze revealed the stem layer structure of falchion of Warta. It suggested to the supposition that the falchion was made with the technology of metal chisel or iron rods.

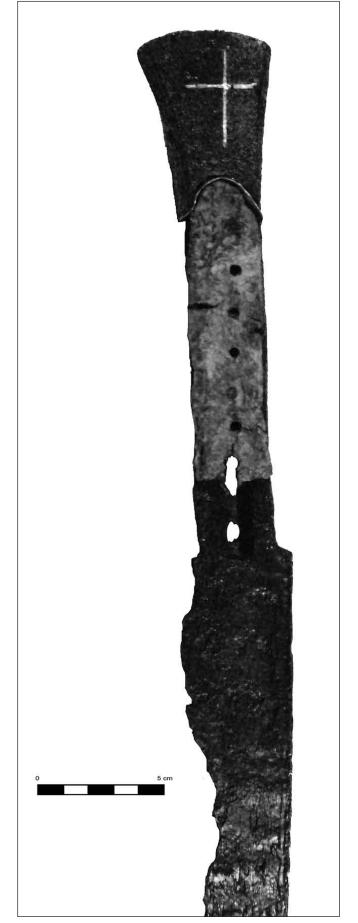


Fig. 4. Grip of falchion from Warta with wooden claddings after the conservation; *Photo O. Lawrynowicz.*

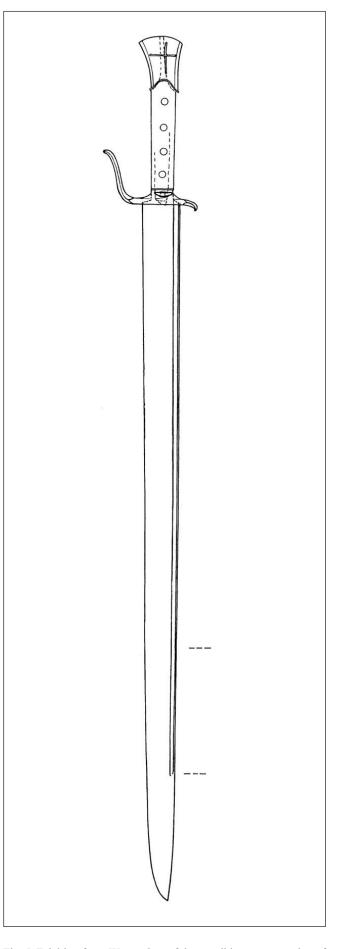
It was decided to prepare a microsection across the blade that had this doubt explain. It was made on a separate, small part of the end of blade. The microsection showed that the test piece was forged from one metal core, rather than a few layers. This is shown by photographs taken under the microscope, which are shown by the homogeneous metal structure, perforated by darker elements, parallel to each other, reflecting the manufacturing process, which was to forge an artifact. Comparing the technique of producing a blade and pommel, raises the observation that the head was made in the forging process, as evidenced by the fact that in its uniform surface structure formed during the process of circular microscopic pitting corrosion. In the case of blade forging process was much more intensive, which resulted in characteristic fibrous structure.

The ornament in the form of asymmetric cross can hardly be treated as an individual mark of the owner or heraldic figure⁴². This is one of many examples that marks of arm cannot be a fully capture function marks⁴³. It should be seen as a mutation of the cross, a decorative referring to Christian ideology, with a supernatural way to protect the owner from injury or death. The decorating on other falchion pommels are stylistically related to the form of stars (rosettes), wherein they are composed of five or seven arms⁴⁴. Falchions pommels decorated with the motif of star are dated to the second half of the 15th century⁴⁵. The original form of pommel decoration of falchion from Warta suggests that it was produced by order of a person, whom could not be indifferent the religious life.

It seems that it is no accident that the two shown examples of weapon remained in good condition until today. Probably a lot cheaper specimens of falchions from the 14th to 16nth centuries was of lower quality that underwent rapid destruction or simply were forging in other metal products.

The falchion of Warta is also a unique example of the archaeological artefact, which confirms that the falchion prices could have a big impact on the cost of implementing grip claddings made from organic material. The laboratory tests have shown that they are made of hardwood trees, possibly with birch (*Betula sp.*)⁴⁶, the tree species, which is considered an excellent material for furniture

⁴⁶ See, e.g. W. Szafer, S. Kulczyński, B. Pawłowski, *Rośliny polskie*, Warszawa 1967, pp. 52-53.



Fig, 5. Falchion from Warta. One of the possible reconstruction of the weapon; *drawing by W. Wasiak*.

⁴² J. Szymański, *Herbarz średniowiecznego rycerstwa* polskiego, Warszawa 1993, pp. 21-48.

⁴³ M. Głosek, Znaki i napisy na mieczach średniowiecznych w Polsce, Wrocław 1973; M. Głosek, L. Kajzer, Uwagi o znakach na broni w polskiej sztuce gotyckiej, "Rocznik Muzeum w Toruniu", Vol. 8, 1982, pp. 67-104.

⁴⁴ P. Michna, *Tesák z Janoslavic na* Šumpersku. Příspěvek k poznání jednoho drhu archeologických nálezů, [in:] Z pravěku do strědověku. Sborník k 70. narozeninám Vladimíra Nekudy, eds. R. Nekuda, P. Michna, J. Unger, Brno 1997, pp. 260; L. Marek, Broń biała..., p. 57.

⁴⁵ P. Žákovský, *Tesáky ze sbírek Státního hradu Zvíkova…*, p. 468.

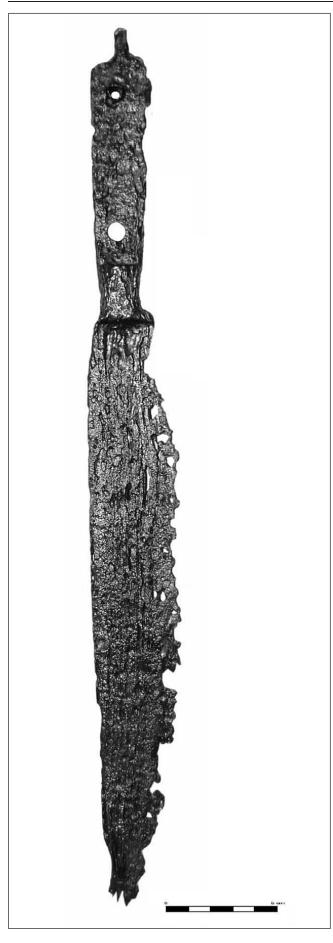


Fig. 4. Weapon from Bielica; After Ławrynowicz, Pudło 2010, Fig. 1.

carpentry, carving products and woodcarver. The remaining of wooden cladding of falchion grip to our times is rare. A fragment of the cladding grip were retained even also in the case of mentioned falchion from Zborów near Kalisz, although, due to the lack of specialized studies, it was impossible to determine whether it was made of wood or horn⁴⁷. The part of wooden cladding grip, decorated with rosettes made of brass tubular rivets is situated on the falchion from the Silesian castle in Rogowiec⁴⁸.

It is possible that also the cladding grip of falchion from Warta was decorated with colored metal; there were discovered traces of copper alloy on left cladding grip, below the pommel of falchion. Wooden cladding grips were originally combined with all falchion by spirally rolled iron plaques. They were not so classic or tubular rivets. It seems that in addition to aesthetics, the main reason for doing this was that the tight spiral of ever gave stronger metal fusion cladding grip than would be the classically used, also tubular, strings.

The cited above examples show that falchions were used by the chivalry and nobility⁴⁹. The falchions were part of equipment also the servants of chivalry. This is demonstrated by records of the court trial of 1432, from which it appears that Jan, a servant of Andrzej of Lednica recovered his falchion, which earlier was taken from him by some Rząska, servant of Mikołaj Stojowski⁵⁰. Also in the case of file of 1460, concerning the robbery, committed by the Jan Fridro de Plessowicze was recorded servant *cum gladio et cum cutella alias scordem*⁵¹.

In the sources we find a number of references attesting to the fact that the circle of falchions users was much wider. Above all, mentioning at this point you need to mercenary infantry⁵². There were not remained much information

⁴⁹ See also the mention about the falchion of 1399, from the act of a dispute between knights Jaszko of Byczyna and Jaszko of Sobolów, where it is talked, among other items, about the falchion; *Antiquissimi libri iudiciales terrae Cracoviensis*, ed. B. Ulanowski, Kraków 1884-1886, [in:] *Starodawne prawa polskiego pomniki*, Vol. 8, Nos. 10467, 10894.

⁵⁰ Pomniki (wypisy) z ksiąg dawnych sądowych ziemskich i grodzkich ziemi krakowskiej, ed. A. Z. Helcel, Kraków 1870, [in:] Starodawne prawa polskiego pomniki, Vol. 2, No. 2462.

⁵¹ Akta..., Vol. 13, No. 4438.

⁵² There were the following soldiers: in the ward captains Marek and Grot: Myorhawsky samostrzel podzelowany kordzyk, in the ward of Łojek: Mychisthawsky schamostrzel nowy kordzyk; in the ward of Brożyna: Konyk schamostrzel podzelowany korth; in the ward of Ogarek: Blaszek schamostrzel pochodzony korth, in the ward of Ogarek: Blaszek schamostrzel stary korth; in the ward of Marek: Albertus Cypurna pyszczel paweska a kordzyk, Paulus Grodek schamostral sthary korth; w rocie Niemczyckiego: Barthosz z Zywcza schamostrel stari kord, Maczey z Brzeszna schamostrel dobri kord; in the ward of Ścibor and Janecki: Stanislaw z Racyborza kuscha korth, Myklasz z Raczyborza kuscha pochodzona korth, Marczyn Rynyek kuscha korth, Andrzey holy kuscha dobra korth, Central Archives of Historical Records in Warsaw, King's Accounts (Archiwum Akt Dawnych

⁴⁷ S. Teske, *op. cit.*, pp. 237-238.

⁴⁸ L. Marek, Broń biała..., p. 53.

about users of falchions. The records from 1471 show that for 1,880 soldiers, which were recorded with the same type of edge weapons, only 9 had the falchions, also 3 soldiers had weapons entered in the register as little falchion (Polish *kordzik*). All these soldiers were shooters, and so the group retrieves the lowest wages – 5 florins for a quarter of year. Their low level of wealth, at least part of the group of soldiers, is demonstrated by the fact that as many as 7 crossbows were identified as old or repaired (Polish *podzelowane*). In the case of few soldiers we can specify their territorial origin. So the two came from Racibórz in Silesia, one of Żywiec in Lesser Poland. The names and surnames of other shows that at least the majority of them came from the lands of Polish Kingdom⁵³.

The falchions were also included in the equipment of mercenaries cavalry. The evidence of this is given by a record of 1454, which shows that Mikołaj Chrząstowski, a soldier in the service of the Prussian Confederation, received 5 guilders compensation for loss of 2 crossbows, a sword and a falchion⁵⁴.

The *thasak* was recorded in the list of cars sent by the Polish royal cities for war with the Teutonic Knights in 1521. This weapon was equipped by Jan Warchoł, the driver who ran a car loaded with food, issued by the city of Mogelnica in Mazovia. He was the sole owner of such weapons out of 230 recorded in the register of the drivers and escorts people equipped with the edge weapon⁵⁵. The functions of the drivers and escort cars attend as a rule, the municipal servants.

The mentions about falchions appear in the records of disputes fought in the court of Academy of Kraków. In 1473, Bartłomiej of Byczyna sued Nicholas *de Lancz*, accusing him of misappropriating the falchion of value 10 grosses. In 1475 came the mention of a process in which bachelor Jakub of Nowa Sól demanded from Mikołaj of Biecz to 8 grosses *pro framea*. However, in 1523 student Wacław Okoń and Andrzej of Poznań sued about falchion of the value 10 grosses. In the same year a dispute was considered in which participated

again Andrzej of Poznań titled as *venerabilis magister*, sued in court by Piotr of Lwów, bachelor of arts. The lawsuit concerned a.e. bow and arrows with quivers of 1 florin (*arcum cum sagittis et pharetera alia repositorio huiusmodi telorum in valore vnius floreni*) and falchion (*framea*) also priced at 1 florin (30 grosses). As shown the owners and therefore probably users were also students in Kraków and clerics⁵⁶. Quoting these mentions it should be noted that *framea* can also mean a sabre. In the case of weapon in the price of 8-10 cents, we can be pretty sure that it were falchions. As for information on weapons for 30 cents could be a high-quality falchion, or weapons that deliberately overstated the cost to obtain the highest possible compensation. However, the subject of this dispute could be a saber.

As already mentioned, among the users of falchions were also clergy. In 1435 Tomasz, a cleric from Wieliczka borrowed a weapon from some Benedykt⁵⁷. The next two records about falchions in the possession of clergy comes from 1488. We found them in the acts of the consistory of Lwów. The first one says that the priest Albert of Kulików (*minister ecclesiae*) asked the court to award him the falchion for 1 floren after the death of Michał, the cleric of the same church. The falchion (*framea*) for 10 grosses was also the subject of the spot between Paweł, a teacher from the school (*rector scole*) in Dolina and some Jan Czogowski⁵⁸. Perhaps to the one of clerics belonged the mentioned falchion from Warta, whose pommel is decorated with a motive of cross.

The records of various courts are showing falchions in the context of common crimes. From the turn of the 14nth and 15nth century comes the mention of armed robbery, which was committed by Jaszo Dunaj, a servant of Peter of Dębno. He assaulted Stanislaw Krzopa of Lusławice and robbed him of 10 marcs of silver, gloves and falchion⁵⁹. Similar events took place in 1436, when the innkeeper Andrzej of Lednica was assaulted on a public road by three courtiers (*familiares*) of Łęczyca castellan Wojciech Malski. The attackers took the innkeeper coat and falchion (*cultellum*)⁶⁰.

In 1441, the victim of road assaults was peasant Jan from Łosina Górna. The striker was a nobleman Jan, son of Andrzej of Rupniów. According to the testimony of the victim, he was injured by 13 blooded and strong wounds, and robbed of the belt, falchion (*cultellum magnum*) and ax, all with a total value of 1 marc⁶¹.

w Warszawie, Rachunki Królewskie), Vol. 16, c. 5, 7v, 13v, 16v, 70v, 98, 103, 106v, 124, 124v.

⁵³ T. Grabarczyk, *Piechota zaciężna Królestwa Polskiego* w XV wieku, Łódź 2000, p. 119-121.

⁵⁴ Księga żołdu Związku Pruskiego z okresu wojny trzynastoletniej 1454-1466, ed. A. Czacharowski, Toruń 1969, p. 65.

⁵⁵ The remaining soldiers had 152 swords, including 3 sheavy-handed (so-called sharshoons, Polish szarszuny), 76 sabers and 1 koncerz; *Rejestr wozów skarbnych od miast i miasteczek Rzeczypospolitej koronnych na wyprawę wojenną roku 1521 dostarczonych*, ed. C. Biernacki, "Archiwum Komisji Historycznej" 1886, Vol. 3 (=Scriptores Rerum Polonicarum, Vol. 9, Kraków 1886), p. 496; J. Szymczak, *The Arms and Armour of The Municipal War Wagon Escort in 1521*, "Fasciculi Archaeologiae Historicae", Vol. 12, 1999, p. 29, 31. The Mention about tasak of the coachman from Mogielnica is chronologically the second information about this weapon in the Polish sources, J. Szymczak, *Cedula na sąd boży z 1511 roku*, "Acta Universitatis Lodziensis. Folia Historica", Vol. 44, 1992, p. 121.

⁵⁶ Acta rectoralia Almae Universitatis Studii Cracoviensis inde ab anno MCCCCLXIX, ed. W. Wisłocki, Vol. 1: 1469-1537, Kraków 1893-1987, Nos. 308, 420, 2650, 2706.

⁵⁷ Słownik historyczno-geograficzny Królestwa Polskiego, Vol. 3, http://www.slownik.ihpan.edu.pl, [8.10.2013] (further: SHGKP)

⁵⁸ Acta rectoralia..., Vol. 1, Nos. 1309, 2161.

⁵⁹ Antiquissimi libri iudiciales terrae Cracoviensis, ed. B. Ulanowski, Kraków 1884-1886, SPPP, Vol. 8, No. 11206.

⁶⁰ SHGKP, Vol. 3, http://www.slownik.ihpan.edu.pl.

⁶¹ Pomniki (wypisy) z ksiąg dawnych sądowych ziemskich i grodzkich ziemi krakowskiej, ed. A. Z. Helcel, Kraków 1870, [in:] SPPP, Vol. 2, Nos. 2999, 3004.

Tasak was also noted for equipment, which had to be used by the participants of judicial duels (*duellum*). In 1511, in Krakow, Mikołaj Turski had to fight with Mikołaj Smolikowski. In the schedule (Polish *cedula*) issued specially for the occasion, there were defined conditions of fight, including the description of equipment of opponents. Their offensive weapons were a lance, a sword and a *tasak*, namely falchion (*thesak to iest kord*)⁶².

In the medieval studies it is assumed that falchions because of the reasonable price were very popular weapon in medieval Poland⁶³. Their popularity might provide the appearance of them in the scenes of Passion in gothic paintings that sometimes are emphasized in the literature⁶⁴.

This thesis – perhaps right – is not reflected in the written sources, which mention about falchions that not occur too often. On this basis we may rather get the impression that it was the weapon used much less frequently than the sword, which was outgoing in popularity from the second half of the 15th century, outgoing popular in favour or of sabers.

On the other hand, mentions collected above show how universal weapon was a falchion. This lightweight and compact weapon, although not having the knight lineage⁶⁵, was used by the chivalry and nobility. In use were the falchions with more complex construction, which can be exemplified discussed above an artifact of Warta. Both the artifacts as well as mentions in written sources, indicates decorating these weapons, sometimes even by silver plating of hilt. These items can be a decoration of many noble arsenals. A number of references shows falchion as a weapon worn on a daily basis for personal safety. There were even falchions among tournament equipment. While the use of falchions by Polish nobility on the battlefield, we can only guess⁶⁶, the information about falchions in mercenaries equipment clearly indicate their combat adoption.

However, we are not willing to consider as the most frequent users of falchions the knights or mercenaries and plebeians. The low purchase cost and portability of this weapon did falchions the weapons satisfying their expectations. They did not need the falchions to fight with enemy protected by armour, which can be found on the battlefield. Reading of the sources one gets the impression that falchions were worn rather every day, on the road, when it could be used successfully to defend themselves against robbers.

The archaeological, iconographical and written sources does not provide a basis for estimating how much falchions were popular during the thirteenth to sixteenth century. However, that it is difficult to find another weapon that could be used by both the knights and their servants, citizens, peasants, and even students and clergy. So the general public and a comprehensive range of adoptions of the falchions explains their diversity, both in terms of applied design, used technology, and manners of finishing and decoration of the weapon.

Streszczenie

Kordy, tasaki i ich technologia w Polsce XIV-XVI w.

Kordy i tasaki to broń jednosieczna o głowni prostej lub lekko wygiętej, używana w Polsce od XIII w. W artykule chcielibyśmy skoncentrować się na obszarze XIV--XVI-wiecznego Królestwa Polskiego.

Najstarszą w polskich źródłach wzmianką o kordzie jest zapis z 1297 r.: gladium vel cultellum quod vulgariter dicitur kord. W źródłach pisanych broń ta występuje pod łacińskimi określeniami longum cultellum, magnum cultellum, cultellum cord cultellum alias kord magnum. Spotykane są również polskie terminy: korth, kordzik, a od XVI w. również thesak. Tasaki mogą kryć się w późnośredniowiecznych źródłach pisanych pod nazwą framea, a więc taką samą jakiej używano dla szabli.

Wytwarzaniem kordów i tasaków zajmowali się tak nożownicy, jak i mieczownicy. Ostatecznie to tym ostatnim przypadło prawo do produkcji kordów, na co wskazują XVI-wieczne taksy wojewodzińskie, w których mowa jest o mieczownikach jako producentach kordów.

Ceny kordów i tasaków charakteryzują się dużą rozpiętością. Najstarsza znana wzmianka o cenie pochodzi z 1396 r., wspomniany w niej kord oszacowano na 7 groszy.

Następna zapiska podająca koszt korda pochodzi z 1432 r., kiedy to w Sieradzu sprzedano magno cultello dicto cord za 8 gr. W 1469 r. kord wraz z pasem wyceniony został na 17,5 grosza. Z lat 70. i 80. XV w. pochodzi kilka wzmianek o kordach oszacowanych na 8-10 groszy. Natomiast z 1428 r. pochodzi informacja o skradzionym kordzie wartości aż 2 grzywien.

⁶² J. Szymczak, *Cedula*..., pp. 113, 120-122, there is the older literature.

⁶³ M. Głosek wrote: "During this period [1350-1450] it was probably the most popular, simple and inexpensive type of edge weapon, worn on a regular basis, usually by the rich burghers and peasants, but also by the state of chivalry, especially during an off-site battle"; M. Głosek, *Broń biała długa*, pp. 122-123. About *tasaks* as a "quite common" weapon and *kords* as a weapon "more of common then *tasak*" in late medieval Poland also wrote A. Nowakowski, *Uzbrojenie indywidualne*, [in:] *Polska technika wojskowa do 1500 roku*, ed. A. Nadolski, Warszawa 1994, p. 205.

⁶⁴ A. Nadolski, *Polska broń...*, p. 71; P.A. Nowakowski, *Arsenały domowe rycerstwa polskiego w średniowieczu*, Toruń 2006, p. 72.

⁶⁵ O. Ławrynowicz, *Treści ideowe broni rycerskiej w wiekach średnich*, Łódź 2005, p. 9.

⁶⁶ With falchion fought the Emperor Otto IV at the Battle of Bouvines in 1214., J. Szymczak, *Broń biała...*, p. 421.

Znacznie więcej informacji o cenach kordów i tasaków przynoszą źródła z XVI w., a szczególnie taksy wojewodzińskie z tego okresu, w których jest szereg wzmianek o cenach tej broni. W przeanalizowanych taksach wydanych w okresie od 1538 do 1589 r. ceny za kord z jelcem mieszczą się w przedziale od 11 do 20 groszy. Za kord o prostszej budowie, zwany "sądeckim" w tych samych taryfach spotykamy ceny od 9-10 groszy. W taksach wojewodzińskich znajdujemy nie tylko ceny za całe kordy ale również informacje o kosztach ich napraw. W zależności od typu korda i zakresu prac ich koszt wynosił od 3,5 do 10 groszy. Przedmiotem sporu sądowego w 1523 r. był kord wyceniony aż na 60 groszy. Źródła XVI-wieczne zawierają informacje o kordach wykończonych srebrem i złotem.

Zwraca uwagę, że ceny kordów i tasaków pojawiające się w aktach sądowych niekiedy znacznie przewyższają wartości podawane w innych źródłach. Trudo jednoznacznie stwierdzić, czy tak duża wartość broni wynikała z jej wysokiej jakości i ponadstandardowego wykończenia, czy tez raczej była efektem wygórowanych żądań wysuwanych przez poszkodowanego.

Zróżnicowanie cen świadczy o tym, iż zarówno pod względem konstrukcyjnym, jak i sposobem wykończenia kordy mogły się bardzo różnić. Przykładem kordów, które wykonano z zastosowaniem bardziej zaawansowanych technologii mogą być egzemplarze z Bielicy (woj. pomorskie) i Warty (woj. łódzkie).

Zabytek z Bielicy jest w zasadzie długim nożem bojowym, gdyż jego długość całkowita wynosi 38 cm, chociaż pierwotnie była większa. Zabytek ten poddany został badaniu radiograficznemu, które wykazało istnienie dwóch elementów tworzących głownię. Prawdopodobnie jego rękojeść wraz większą częścią głowni wykonane zostały z jednego kęsa żelaza. Osobno jednak wytworzono nakładkę ostrzową, którą następnie zespolono z resztą głowni. Zawartość węgla dla ostrza wynosiła 0,85% natomiast dla grzbietu głowni 0,57%. Z kolei kord z Warty wykuty został z jednego kęsa metalu. Najbardziej charakterystycznym elementem zabytku jest głowica zdobiona krzyżem inkrustowanym mosiądzem.

Wydaje się, że nie jest przypadkiem, iż przedstawione dwa przykłady kordu zachowały się w dobrym stanie do czasów współczesnych. Zapewne wiele tańszych egzemplarzy kordów z XIV-XVI w. było na tyle słabszej jakości, że ulegały szybszej destrukcji lub po prostu były przekuwane w inne wyroby metalowe.

Ze źródeł pisanych wynika, że kordy i tasaki, choć miały rodowód plebejski, były używane przez szlachtę. Stanowiły również wyposażenie sług rycerskich. Sporadycznie broń tę używali zaciężni. Z rejestrów z 1471 r. wynika, że spośród 1880 piechurów, przy których odnotowano broń białą, zaledwie 9 miało kordy, ponadto 3 posiadało kordziki. Jak dotąd znana jest tylko jednak wzmianka o kordzie na wyposażeniu zaciężnego jeźdźca. Z kolei thasak stanowił uzbrojenie jednego z żołnierzy eskorty wozów picznych wysłanych na wojnę w Prusach w 1521 r. Ponadto wśród użytkowników broni tego typu odnotowano duchownych, studentów, chłopów i karczmarza. Tasak odnotowany został także wśród uzbrojenia, którym mieli posługiwać się uczestnicy pojedynku sądowego w 1511 r.

Z lektury źródeł pisanych można odnieść wrażenie, że kordy i tasaki częściej niż na wojnie używane były na co dzień, jako broń osobista mająca zapewnić użytkownikowi bezpieczeństwo. Potwierdzony źródłowo szeroki krąg odbiorców i wszechstronny wachlarz zastosowań kordów i tasaków tłumaczy ich różnorodność, zarówno pod względem stosowanych rozwiązań konstrukcyjnych, technologii wykonania, jak i sposobu wykończenia broni.

http://rcin.org.pl