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A Surprise from the East. A Quiver or Bowcase Loop from the Ancillary Settlement in Gdańsk

Abstract

Janowski A. 2023. A Surprise from the East. A Quiver or Bowcase Loop from the Ancillary Settlement in Gdańsk. *Analecta Archaeologica Ressoviensia* 18, 159–165

Archaeological explorations carried out between Tartaczna and Panieńska streets in Gdańsk has provided a wealth of movable historical artefacts. One of them is a quiver/bowcase loop made of antler. The article discusses typological classification, comparative analysis, dating and ethnocultural characteristics of the artefact. Antler and iron elements of quivers and bowcases are very rare in Poland and all of them are considered to be elements of foreign culture: Rus' or Hungarian.

Keywords: Gdańsk, Early Middle Ages, armament, quiver, bowcase, loops, antler and bone objects

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Archaeological excavations carried out between Tartaczna and Panieńska streets in Gdańsk between 2008 and 2010 yielded a range of rare, unexpected and precious artefacts (cf. Drozd 2013; Misiuk 2013; 2016; Rapiejko 2013; Szczepanowska 2013; 2019). A small, unidentified earlier artefact made of antler uncovered in layer 1196 and which can be dated to the 2nd half of the 13th century (Fig. 1), is undoubtedly one of them (currently in the collection of Archaeological Museum in Gdańsk, SAZ 255/04/04, cat. no. 1606). The object is slightly damaged and its preserved extent is 127.22 mm long and 5.1-5.6 mm thick. Its base is straight, and the top is arched and profiled. The maximum width is 21.63 mm. The top part of the object is smooth and polished while the bottom part is rough. There is quite a deep and narrow grove running along the top edge. There are three holes in the artefact at its current level of preservation; however, it is possible that originally there were more. The biggest hole is located in the middle and has an irregular oval shape measuring 14.4 × 8.8 mm, while to the left and right there are two smaller ones whose diameter measures 4.3 mm each. In the central hole on the upper and the bottom side there is visible abrasion which forms

ca 45° angle with the longer edges of the object. On the basis of the general shape and characteristic features, such as the abrasion visible at the central hole which is the trace of a thong which was attached to it, the object can be identified as a quiver or bowcase loop (in Russian $nem\pi u$).

The bow was a popular weapon in the early Middle Ages in Poland, evidenced not only in written and iconographic sources but also by the arrowheads which have been uncovered en masse (cf. Nadolski 1954, 60; Nowakowski 1991, 75). However, the situation is worse with the preserved relics of the bows, and only a few surviving remains of so-called selfbows (a bow made entirely of one piece of wood), a perishable raw material, are known to us (cf. Dmochowski and Wrzesiński 2004, 313-314). There is a general agreement among weapons experts that reflex bows, called eastern bows, were also used in Poland. However, the issues at stake are how often this was the case, when this type of bow appeared in Poland, and finally who used them (Nadolski 1954, 61; Nowakowski 1991, 76). It needs to be considered that the reflex bow was an almost iconic weapon of nomadic tribes of the Eurasian Steppe (cf. for example: Świętosławski 1996,



Fig. 1. Quiver or bowcase loop from Gdańsk (photo by A. Janowski).

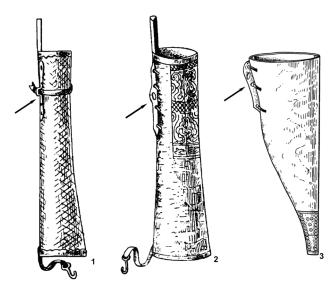


Fig. 2. Quiver with iron fittings (1), with a loop made of antler (2) and bowcase with loop made of antler (3) (according to: Medvedev 1966, pl. 1: 8, 9; fig. 3).

39-44; Karpowicz 2007; Biró 2013; Loades 2016), and which could have been brought to the Polish territory through the Rus' or Hungarians. Its other name - the composite bow - reflects its complicated construction being a combination of the right species of wood, horn, bone, animal tendon and birch bark joined with glue made of swim bladder. The presence of bows made only of layers of wood called "northern bows" in the territory of Poland inhabited in the past by the Baltic tribes is a separate problem (cf. Juszyński 2018). Not long ago, only individual remains of composite bow had been uncovered in eastern Poland and were clearly a foreign element. However, Piotr Dmochowski and Jacek Wrzesiński (2004) noted the possibility of the reinterpretation of the function of some unidentified or misidentified finds from central Poland. Nevertheless, they remain very rare finds.

Quiver finds, portable cases for holding bows and arrows, are even scarcer. They are practically unknown not only in the material culture in Poland but also in more general terms, in territories inhabited by West Slavs such objects are practically unknown; they are, however, to be found among artefacts uncovered in the territory inhabited by East Slavs and nomadic tribes. The shape of such objects was similar, but some construction details were different. The quivers and bowcases used by Avars and Hungarians were fastened with fittings made of bronze and iron (cf. Holeščák 2019, 59-67), while elements of antlers and bone were used in territories of the Rus' and other nomads, in particular Volga Bulgars and Khazars (cf. for example Fedorov-Davydov 1966, 31-32, fig. 2; Medvedev 1966, 19-25; Malinovskaâ 1974; Flerova 2000; 2001, 49-50; Rudenko 2005, 70, fig. 5-7; Ilûšin and Sulejmenov 2022). In the opinion of Aleksander Filipovič Medvedev (1966, 20) two types of bowcases were used in Eastern Europe. One was made of leather or wood and strengthened with metal fittings while the other was made of birch bark and elements of antler and bone (Fig. 2). A. F. Medvedev (1966, 20-23, pl. 8, 9) also proposed a classification of bone elements based on their shape: he classified objects with a straight base as quiver loops (Fig. 3), and curved ones as elements of bowcases (Fig. 4). He also introduced a further classification (numbers on artefacts refer to types), however, characteristic features were not defined.

Such an arbitrary classification of elements of straight bases as quiver loops has been contested recently on the basis of finds from graves in the burial site in Sarkel upon Don. In the grave located in tumulus 18, kurgan 49 and cenotaph 1 in kurgan 15, objects of such a form were relevant to a quiver, and their ar-

rangement suggests that together with a curved base loop they could have formed a set. A straight loop was placed at approximately half the length of the bowcase, while the curved ones in the upper part (Fig. 5). An example from kurgan 49 shows that both these elements could also have had straight bottoms (Fig. 6) (see Flerova 2000, 109; 2001, 53–54). In the opinion of Valentina Evgen'evna Flerova (2000, 109; 2001, 53–54) finds uncovered in burial sites excavated at the end of the 19th century in Ûzefovka, district Kiev burial sites (grave 247/1) and Cozarovka, district Kiev (grave 269) located south of Kiev which belonged to nomadic Chorni Klobuki tribes could be interpreted in a similar fashion (cf. Pletneva 1973, fig. 20, 22). The variety

of functions of the element from Tartaczna suggested in the title of this paper is a result of the above doubts. Nevertheless, among the materials presented by A. F. Medvedev (1966, pl. 9: 8), it is closest in shape to the type 8 quiver loop, which stands for an artefact uncovered in *Bilär* (Bilyarsk in today's Tatarstan) in the territory of Volga Bulgaria and very broadly dated to the period between the 9th and the 14th centuries. It is also the only artefact of such a type in the collection of 62 objects in Eastern Europe discussed in this paper (cf. Fig. 3: 8; Medvedev 1966, 42–44, pl. 9: 8). Later weapons from *Bilär* were subject to a separate study. Its author, Faâz Šaripovič Huzin (1985, 135–137), created an independent typology of 40 quiver and bowcase

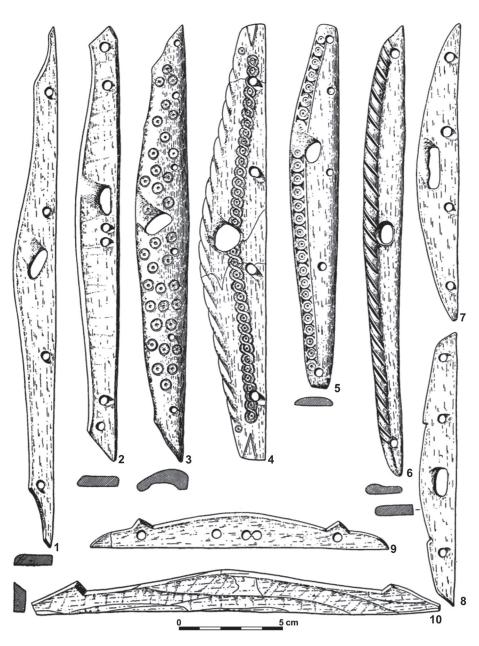


Fig. 3. Quiver loops made of antler (according to: Medvedev 1966, pl. 9).

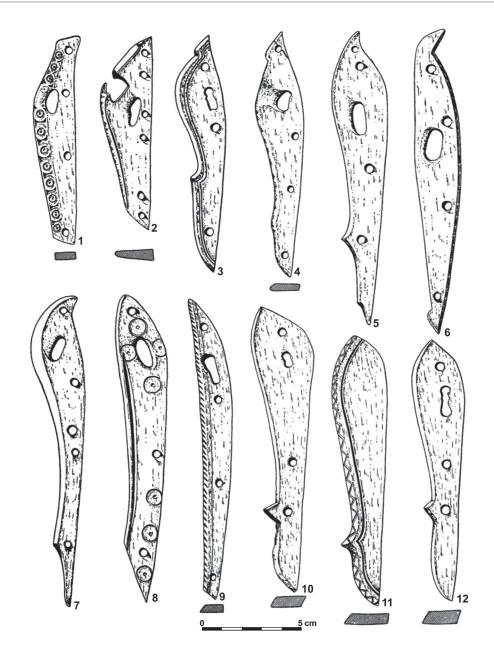


Fig 4. Bowcase loops made of antler (according to: Medvedev 1966, pl. 8).

loops from the capital of the Volga Bulgarians which were known to him. In this three-stage classification (division – group – type) type 8 by A. F. Medvedev was an element of classification identified with loops A.I.3: division A ("wide and thickened" loops), group I ("with flat bottoms"), type 3 ("with arched back and cut in the middle"). F. Š. Huzin knew of only one such artefact from *Bilär* (the one mentioned by A. F. Medvedev), however, he indicated that the object uncovered in Beloozere and dated to the mid and the 2nd half of the 13th century was analogous to it. In fact, the artefact is similar in terms of the general shape, however, the profiling of the upper part is definitely much more expressive (see Golubeva 1973, fig. 46: 10).

Quite recently, the loops uncovered in *Bilär* have become the subject matter of a further study. Dinara Ummetzânovna Pal'ceva, Zufar Gumarovič Šakirov and Aleksej Viktorovič Hudâkov (2012, 324–325, fig. 2) adapted the classification developed by F. Š. Huzin, only changing the nomenclature (type instead of division, sub-type instead of group and category instead of type). Among the 53 artefacts included in the study, two represent type I.1.3. of interest to us, hence it is just one artefact more than in the study by F. Š. Huzin.

As I mentioned above, finds of elements of quivers and bowcases made of antler and bone uncovered in the territories inhabited by West Slavs are unique and it is certain that they have not been identified in

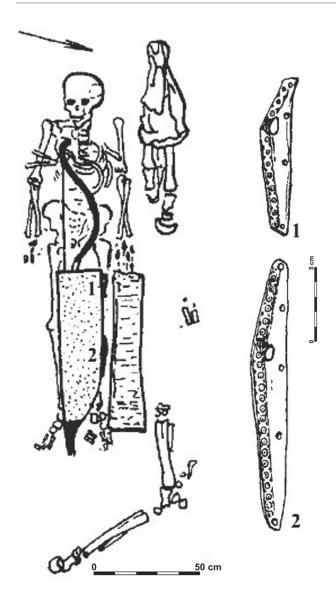


Fig. 5. Sarkel. Burial in mound 18 and bowcase loops made of antler (according to: Flerova 2000, fig. 6).

large numbers. As a matter of fact, the only such find in Poland comes from an excavation in Gródek, Hrubieszów district, on the River Bug. In 1983, during excavations in a cemetery (site 1C) a grave was uncovered (object 14), in which a man in age of maturus (45-50 years old) was buried. The complex has already been subject to numerous studies (cf. for example Jastrzębski and Maciejczuk 1988; Wołoszyn 2005; Kuśnierz 2006, 92-95; Strzyż 2006, 77, 78, tab. IX, nos. 2-10, fig. 15.11) so I will just mention that apart from a sword of Oakeshott's type XI, a fragment of an iron knife, an iron ring, and 10 objects made of antler, which were the remains of a composite bow, a quiver and bowcase were uncovered. The unanimous opinion is that it is a burial of a Rus' warrior. This grave contained an inventory which was of both Western

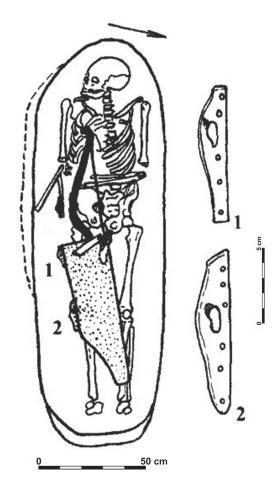


Fig. 6. Sarkel. Burial in mound 49 and bowcase loops made of antler (according to: Flerova 2000, fig. 6).

(sword) and Eastern European (composite bow) origin. The authors of the source publication dated the find to the 12th century (Jastrzębski and Maciejczuk 1988, 60), Marcin Wołoszyn (2005, 96) to the period between the 2nd half of the 11th and the 1st half of the 12th century, while Jerzy Kuśnierz (2006, 95) dated the burial to the period between the 2nd half of the 12th and the beginning of the 13th centuries.

Further examples of remains of quivers and bow-cases uncovered in Poland are of iron. The most numerous collection is the result of excavations carried out in Rycerska Street in Przemyśl between 1976 and 1981, where a burial site of 16 skeleton graves was uncovered. In three of them (graves nos. 1, 6 and 13) men were buried together with horses (partial burials: skull and a limb) as well as sets of weapons and horse harness. In graves 1, 6 and 13 they included *inter alia* arrows in quivers, of which only scarce remains survived: two elements of loops and a few plates. In the opinion of the archaeologists on the dig, it was a small family burial site of nomadic Hungarians, which can be dated to the end of the 9th and the beginning of the

10th centuries (Koperski and Parczewski 1978; Koperski 2003; 2010). Such an interpretation and timeline has recently been contested by Marek Florek (2013, 458–459), who suggested an earlier timeline, i.e. the 1st half of the 11th century, and considers the dead to have been a group of Hungarians exiled by King Stephen I of Hungary and offered refuge by Bolesław the Brave.

The other two finds come from settlement digs. It is possible that iron quiver fittings which date to the period between the 7th/8th centuries and the 2nd half of the 9th century were uncovered in feature 13 in an ancillary settlement in Szczaworyż (Strzyż 2006, 79). The reinterpretation of older finds has recently allowed the identification of an element of a quiver loop in Wrocław. The object which survived in about half its original length (length: 23 cm) was uncovered in an ancillary settlement in Ostrów Tumski in dig I-II/K, layer P dated to the second quarter of the 11th century (Pankiewicz 2023, 253, fig. 157).

The examples referred to in this paper exhaust the list of Polish finds of elements of guivers and bowcases. To date, we know of them from the territories of Lesser Poland, Lower Silesia, and the area around Chelm, hence from the territories of southern and eastern Poland and all of them are considered elements of foreign culture: Rus' or Hungarian. Hence the discovery of such an object so far north in Gdańsk comes as a great surprise, even more so considering that the most similar objects in terms of shape were uncovered in Bilär located 2500 km to the east. The object was uncovered in Gdańsk in a layer dated to the 2nd half of the 13th century. Antler loops appear in the Sarkel fortress built by the Khazars, which was conquered by Sviatoslav, Prince of Kiev in 965 and at the beginning of the 12th century by the Cumans as early as in layers which date to the 930s-960s but most numerously in layers which date to the period between the 2nd half of the 11th and the beginning of the 12th century. Regarding Volga Bulgaria, they are especially numerous in the 12th century (cf. Flerova 2000, fig. 4; 2001, 49-51; Rudenko 2005, 70), however, the Bilär fortress never recovered its former glory after being conquered in 1236 by the army of Batu Khan. Thus it seems possible that the place of its origin needs to be sought in Novgorod from which a considerable number of antler loops come, including ones dated to the 13th-14th centuries (see Medvedev 1966, 43). Although it is not possible to indicate precisely the place in which it was made, undoubtedly the artefact is not of local origin, but was made in Eastern Europe.

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References

- Biró A. 2013. Methodological considerations on the archaeology of rigid, reflex, composite bows of Eurasia in the pre-Mongol period. *Acta Militaria Mediaevalia* 9, 7–38.
- Dmochowski P. and Wrzesiński J. 2004. W poszukiwaniu łuku refleksyjnego możliwości interpretacji na przykładzie znaleziska z Ostrowa Lednickiego. In S. Moździoch (ed.), *Wędrówki rzeczy i idei w średniowieczu* (= *Spotkania Bytomskie* 5). Wrocław: Instytut Archeologii i Etnologii Polskiej Akademii Nauk, 313–333.
- Drozd E. 2013. Zabytki bursztynowe z grodu i osady pozyskane podczas badań przy ulicy Czopowej, Grodzkiej i Tartacznej w Gdańsku, w latach 2006–2010. In E. Fudzińska (ed.), XVIII Sesja Pomorzoznawcza, 2. Malbork: Muzeum Zamkowe w Malborku, 105–113.
- Fedorov-Davydov G. A. 1966. Kočevniki Vostočnoj Evropy pod vlast'û zolotoordynskih hanov. Arheologičeskie pamâtniki. Moskva: Izdatel'stvo Moskovskogo universiteta.
- Flerova V. E. 2000. Kostânye detali lukov, kolčanov i nalučij Beloj Veži. In A. V. Evglevskij (ed.), *Stepi Evropy v èpohu srednevekov'â*, 1. Doneck: Institut arheologíï Nacíonal'na akademíâ nauk Ukraïni, Doneckij Nacional'nyj Universitet, 101–116.
- Flerova V. E. 2001. Reznaâ kost' Ûgo-Vostoka Evropy IX-XII vv.: iskusstvo i remeslo. Po materialam Sarkela-Beloj Veži iz kollekcii Gosudarstvennogo Èrmitaža. Sankt-Peterburg: Aletejâ.
- Florek M. 2013. Węgrzy w Przemyślu. Historia alternatywna. In J. Gancarski (ed.), *Transkarpackie kontakty kulturowe w okresie lateńskim, rzymskim i wczesnym średniowieczu*. Krosno: Muzeum Podkarpackie w Krośnie, 453–492.
- Golubeva L. A. 1973. Ves' i slavâne na Belom ozere X-XIII vv. Moskva: Nauka.
- Holeščák M. 2019. Medieval archery equipment from the territory of Slovakia (= Archaeologica Slovaca Monographiae 31). Nitra: Institute of Archaeology. Slovak Academy of Science.
- Huzin F. Š. 1985. Predmety vooruženiâ. In A. H. Halikov (ed.), *Kul'tura Bilâra. Bulgarskie orudiâ truda i oružie X–XIII vv.* Moskva: Nauka, 130–192.
- Ilûšin A. M. and Sulejmenov M. G. 2022. Predmety krepleniâ kolčana k poâsu iz pogrebenij razvitogo sredneve-

- kov'â v Kuzneckoj kotlovine. *Arheologiâ Evrazijskih stepej* 3, 28–35.
- Jastrzębski S. and Maciejczuk J. 1988. Grób wczesnośredniowieczny z Gródka nad Bugiem, stan. 1C, woj. zamojskie. In G. Labuda and S. Tabaczyński (eds.), Studia nad etnogenezą Słowian i kulturą Europy wczesnośredniowiecznej, 2. Wrocław, Warszawa, Kraków, Gdańsk, Łódź: Zakład Narodowy im. Ossolińskich, 55–61.
- Juszyński J. 2018. Łuk bałtycki jako odmiana północnego łuku refleksyjnego. Próba charakterystyki. *Pruthenia* 11, 11–46.
- Karpowicz A. 2007. Ottoman bows an assessment of draw weight, performance and tactical use. *Antiquity* 81(313), 675–685.
- Koperski A. 2003. Groby wojowników z koniem na cmentarzysku "staromadziarskim" w Przemyślu. In M. Dulinicz (ed.), *Słowianie i ich sąsiedzi we wczesnym średniowieczu*. Warszawa, Lublin: Instytut Archeologii i Etnologii Polskiej Akademii Nauk, Wydawnictwo Uniwersytetu Marii Curie-Skłodowskiej, 365–375.
- Koperski A. 2010. Cmentarzysko staromadziarskie z X w. w Przemyślu. In E. Sosnowska (ed.), *Przemyśl wczesnośredniowieczny* (= *Origines Polonorum* 3). Warszawa: Instytut Archeologii i Etnologii Polskiej Akademii Nauk, 365–387.
- Koperski A. and Parczewski M. 1978. Wczesnośredniowieczny grób Węgra-koczownika z Przemyśla. *Acta Archaeologica Carpathica* 18, 151–201.
- Kuśnierz J. 2006. Z badań nad militarnym znaczeniem Gródka nad Bugiem (Wołynia) we wczesnym średniowieczu. *Acta Militaria Mediaevalia* 2, 79–102.
- Loades M. 2016. *The composite bow* (= *Weapon* 43). Oxford: Osprey Publishing.
- Malinovskaâ N. V. 1974. Kolčany XIII–XIV vv. s kostânymi ornamentirovannymi obkladkami na territorii evrazijskih stepej. In A. P. Smirnov and G. A. Fedorov-Davydov (eds.), *Goroda Povolž'â v srednie veka*. Moskva: Nauka, 132–175.
- Medvedev A. F. 1966. Ručnoe metatel 'noe oružie (luk i strely, samostrel) VIII–XIV vv. Moskva: Nauka.
- Misiuk Z. 2013. Wstępne wyniki badań archeologicznych prowadzonych na obszarze protomiasta gdańskiego pomiędzy dzisiejszymi ulicami Tartaczną i Panieńską w Gdańsku w latach 2008–2009. In M. Fudziński and H. Paner (eds.), XVII Sesja Pomorzoznawcza, 2: Od późnego średniowiecza do czasów nowożytnych. Gdańsk: Muzeum Archeologiczne w Gdańsku, 337–370.
- Misiuk Z. 2016. Wstępne wyniki badań archeologicznych pomiędzy ulicami Tartaczną i Panieńską w Gdańsku,

- prowadzonych przez Fundację Ochrony Zabytków w latach 2008–2010. In M. Fudziński (ed.), *I Pomorska Sesja Sprawozdawcza*. Gdańsk: Muzeum Archeologiczne w Gdańsku, 115–132.
- Nadolski A. 1954. Studia nad uzbrojeniem polskim w X, XI i XII wieku (= Acta Archaeologica Universitatis Lodziensis 3). Łódź, Wrocław: Zakład Narodowy im. Ossolińskich.
- Nowakowski A. 1991. *Uzbrojenie średniowieczne w Polsce* (na tle środkowoeuropejskim) (= Skrypty i Teksty Pomocnicze). Toruń: Uniwersytet Mikołaja Kopernika.
- Pal'ceva D. U., Šakirov Z. G. and Hudâkov A. V. 2012. Predmety vooruženiâ i snarâženiâ Bilâra iz kosti. *Filologiâ i kul'tura* 4(30), 324–330.
- Pankiewicz A. 2023. Wrocław. Gród na Ostrowie Tumskim we wczesnym średniowieczu (= Origines Polonorum 18). Warszawa, Wrocław: Instytut Archeologii i Etnologii Polskiej Akademii Nauk.
- Pletneva S. A. 1973. Drevnosti Čërnyh Klobukov (= Arheologiâ SSSR. Svod arheologičeskih istočnikov E1-19). Moskva: Nauka.
- Rapiejko A. 2013. Średniowieczne i nowożytne elementy uzbrojenia z badań przy ul. Tartacznej. In E. Fudzińska (ed.), XVIII Sesja Pomorzoznawcza, 2. Malbork: Muzeum Zamkowe w Malborku, 115–122.
- Rudenko K. A. 2005. Bulgarskie izdeliâ iz kosti i roga. In K. A. Rudenko (ed.), *Drevnosti Povolž'â: èpoha srednevekov'â*. Kazan': Škola, 67–97.
- Strzyż P. 2006. *Uzbrojenie we wczesnośredniowiecznej Małopolsce* (= *Acta Archaeologica Lodziensia* 52). Łódź: Łódzkie Towarzystwo Naukowe.
- Szczepanowska K. 2013. Kafle miniaturowe w badań archeologicznych przy ulicy Tartacznej w Gdańsku. In M. Fudziński and H. Paner (eds.), XVII Sesja Pomorzoznawcza, 2: Od późnego średniowiecza do czasów nowożytnych. Gdańsk: Muzeum Archeologiczne w Gdańsku, 457–470.
- Szczepanowska K. 2019. Kafle piecowe z badań archeologicznych przy ulicy Tartacznej w Gdańsku. Uwagi na temat statusu ekonomicznego ich użytkowników. *Gdańskie Studia Archeologiczne* 7, 130–155.
- Świętosławski W. 1996. Uzbrojenie koczowników Wielkiego Stepu w czasach ekspansji Mongołów (XII–XIV w.) (= Acta Archaeologica Lodziensia 40). Łódź: Łódzkie Towarzystwo Naukowe.
- Wołoszyn M. 2005. Między wschodem a zachodem: pochówek wojownika ze stanowiska 1C w Gródku, pow. hrubieszowski, woj. lubelskie. *Acta Militaria Mediaevalia* 1, 87–105.



