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FABRICS IN MEDIEVAL DRESS IN POMERANIA

Dress is frequently perceived as one of the distinguishing features of the human species. Since the Biblical fig leaf, clothing has always accompanied man, being an indispensable element of his everyday life regardless of time and place. Little wonder the history of attire has long been a field of study for humanists.

Reconstruction of historical clothing is based on surviving originals, iconography, written records and, last but not least, archaeological finds. Particularly, the latter, being a direct source of knowledge, provide invaluable information for costume researchers. Their main advantage over other types of historical material lies in the fact that they reach the researcher untouched. Their original form has not been spoilt by any changes or subject to conservation treatment, which may have affected the appearance of specimens kept in various collections for centuries. Archaeological finds, crucial to the study of dress of basically any historical epoch, are especially important for scholars dealing with clothing of the most remote historical periods, including the Middle Ages.

Discussing archaeological textiles, the variety of uses and applications of textile goods in the medieval world should not be underestimated. There existed many kinds of technical textiles; fabrics were used to pack goods, make sails, tents and wagon covers. Also, archaeological finds may be the remains of household textiles, for example, tablecloths, towels, bedclothes, bed covers, large and small sacks for storing spices and powder foods, blankets, tapestries and carpets. Judging from iconographic material, such utensils used to be made from decorative, frequently patterned fabrics. Using exclusively such criteria as the quality and price of a piece of cloth, finds of this type may easily be misclassified as a fragment of attire.

The remains of ancient dress are just a part of archaeological textiles. Regrettably, the discoveries of complete or nearly complete outfits are extremely rare. Two main causes of this situation can be identified. Firstly, generally speaking, organic materials textiles do not always survive in a good state of preservation. The fact whether soil deposits will preserve a textile depends not only on their properties but also on the type of fibre from which the cloth was made. The soil conditions favourable to the preservation of animal fibres (e.g. wool) and plant fibres (e.g. flax) differ

considerably. For this reason wool and even silk products are a dominant group among archaeological textiles, while linen goods, undoubtedly very popular in the Middle Ages, are scarce¹.

Another significant factor that determines the type of surviving archaeological find is the medieval economy. At that time, the majority of clothes were reused or remade; new garments were sewn using old pieces of material. Before becoming part of archaeological deposits, medieval textiles had performed a number of functions and were finally thrown into the latrine as rags used for hygienic purposes. Surprisingly, textiles were handled with such care not only by the poorer classes of contemporary society. In ruling elite circles, textiles were also considered as valuable and not carelessly disposed of. Władysław Jagiello's garments were often mended and darned by tailors and darners (*sartores*)². Another example, found at the Bohemian court, are the funeral clothes of Ladislas the Posthumous, whose dalmatica was a remade court garment³.

Despite the above complications, fragments of cloth which must have been parts of outfits are discovered among archaeological finds. Fragments with stitched buttonholes or sewn on buttons, pieces of cloth with gussets, cut out woolen cloth ornaments, or finally fabrics too delicate to be used for any household purposes are a useful source of information about ancient dress. Consequently, finds from the territory of Poland ought to be examined from this perspective.

In Pomerania, there is a large number of archaeological sites of medieval provenance where textiles were found among other kinds of manmade objects. The material has been identified and thoroughly examined from the technological point of view and the finds have been presented in numerous publications. The boundaries of the region referred to as Pomerania need to be precisely established here. Because of the relatively broad chronological range of the present paper, including the entire medieval period, the territory marked

¹ J. Kamińska, A. Nahlik, *Włókiennictwo gdańskie w X-XIII wieku*, Łódź 1958, p. 53.

² H. Kręć, *Dwór królewski Jadwigi i Jagielly*, Kraków 1987, p. 181.

³ M. Bravermanová, M. Lutovský, *Hroby a hrobky našich knížat, králů a prezident*, Praha 2007, pp. 167-168.

by natural boundaries seems to be the most adequate point of reference. Thus the region lies on the south shore of the Baltic Sea and stretches out as far as the line of swamps and marshes of the Warta and Noteć rivers. The eastern limits of the region are marked by the Vistula River and it borders on the Oder River in the west⁴.

The examined and published textile finds come from the following Pomeranian archaeological sites: Gdańsk (site 1-5, site 9, Gdańsk-Osiek, Gdańsk Oliwa, the Isle of Granaries)⁵, Wolin⁶, Santok, Gniew, Kamień Pomorski (site 1 and 2), Nakło, Tuchola, Puck Bay⁷, Dębczyno⁸, Kołobrzeg⁹, Junkrowy,¹⁰ Gruczno¹¹. Because of the relatively advanced research into medieval textiles, this region has been selected

⁴ Cf.: J. Maik, *Wyroby włókiennicze na Pomorzu z okresu rzymskiego i ze średniowiecza*, Wrocław – Warszawa – Kraków 1988.

⁵ J. Kamińska, A. Nahlik, *op. cit.*; J. Maik, *Wyroby włókiennicze...*; Idem, *Medieval English and Flemish Textiles Fund in Gdańsk*, [in:] *Textiles in Northern Archaeology: NESAT III Textile Symposium in York 6-9 May 1987*, ed. P. Walton, J. P. Wild, London 1990, pp. 119-130; J. Jabłońska, *Tkaniny z badań archeologicznych na Wyspie Spichrzów w Gdańsku w latach 2004-2006*, [in:] *Stan badań archeologicznych miast w Polsce*, ed. H. Paner, M. Fudziński, Z. Borowski, Gdańsk 2009, pp. 201-214.

⁶ A. Nahlik, *Tkaniny wykopaliskowe z wczesnośredniowiecznego Wolina*, „Materiały Zachodnio-Pomorskie”, Vol. V: 1959, pp. 257-276; A. Kaube, *Włókiennictwo wczesnośredniowiecznego Wolina (stanowisko wykopaliskowe nr 4)*, „Materiały Zachodnio-Pomorskie”, Vol. XIII: 1967, pp. 91-142; J. Maik, *Wczesnośredniowieczne wyroby włókiennicze w Wolinie*, „Materiały Zachodniopomorskie”, Vol. XXXII: 1986, pp. 155-180; Idem, *Frümittelalterlichen Textilwaren in Wolin*, [in:] *Archaeological textiles: Report from the 2nd NESAT Symposium 1-4.V.1984*, Arkaeologiske Skrifter 2, eds L. Bender Jørgensen, B. Magnus, E. Munksgaard, København 1988, pp. 162-186; Idem, *Wyroby włókiennicze...*

⁷ *Ibidem*.

⁸ A. Sikorski, *Tkaniny z wczesnośredniowiecznego cmentarzyska „szkieletowego” w Dębczynie, gm. Bialogard, województwo koszalińskie*, „Materiały Zachodniopomorskie”, Vol. XXXV/VI: 1989/90, pp. 159-172.

⁹ J. Maik, *Słowiańskie tkaniny w lokacyjnym Kołobrzegu*, [in:] *Archeologia średniowiecznego Kołobrzegu*, Vol. I, ed. Rębkowski M., Kołobrzeg 1996, pp. 229-330; Idem, *Tekstylija*, [in:] *Archeologia średniowiecznego Kołobrzegu*, Vol. II, ed. Rębkowski M., Kołobrzeg 1997, pp. 221-228; Idem, *Wyroby tkackie i powroźnicze*, [in:] *Archeologia średniowiecznego Kołobrzegu*, Vol. III, ed. M. Rębkowski, Kołobrzeg 1998, pp. 271-276; Idem, *Wyroby tekstylne*, [in:] *Archeologia średniowiecznego Kołobrzegu*, Vol. IV, ed. M. Rębkowski, Kołobrzeg 1999, pp. 261-269; Idem, *Sukiennictwo kołobrzesckie w średniowieczu*, [in:] *Salsa Cholbergensis. Kołobrzeg w średniowieczu*, eds L. Leciejewicz, M. Rębkowski, Kołobrzeg 2000, pp. 233-242.

¹⁰ A. Szymańska, *Wstępne wyniki badań archeologicznych na grodzisku w Junkrowach*, „Pomorania Antiqua”, Vol. XVI: 1995, pp. 271-298; In the text the author quotes the research results of an unpublished study by A. Nahlik entitled *Wyniki analizy tkaniny ze stan. 1 z miejscowości Skarszewy, pow. Kościerzyna, woj. gdańskie*, held by the Scientific Archives of the Archaeological Museum of Gdańsk, Inv. No. 1966:147.

¹¹ M. Grupa, *Jedwabne wstążki z wczesnośredniowiecznego Gruczna*, „Pomorania Antiqua” Vol. XXII: 2009, pp. 215-221.

for assessment of the archaeological textiles discovered in respect of their suitability for broadly understood costume studies.

Fortunately, among the numerous archaeological textiles coming from Pomerania, there are finds providing at least sparse pieces of information on ancient dress. Gdańsk 1 is one of the sites abound with finds supplying information on the issue of medieval attire¹². The study of early medieval textiles found on this place made by Janina Kamińska and Adam Nahlik¹³ can be considered the foundation stone for the development of Polish research into archaeological textiles. Site 1 was originally broadly dated to the period between the beginnings of the town, that is, around the year 980, the 10th century, and the year 1308, the beginning of the 14th century. This dating has recently been revised. Dendrochronological analysis has led scholars to believe that the material unearthed on the site should be dated to the years between the last decade of the 11th century and the turn of the 12th century¹⁴. While discussing finds from site 1, I will refer to the latest chronological assumptions.

In the first place, one of the most interesting archaeological textiles not only in Pomerania but in the whole of Poland is a mitten (Fig. 1; inv. no. 1950/2386) discovered in settlement layer 7. This woolen mitten was made using the *nålebinding* technique, which uses a single-eyed needle and thread to create a series of loops and knots, which makes every stitch secure and produces a stretchy material, resembling a knitted fabric¹⁵. The find seems to be the only Polish find produced in this way discovered so far. Finds of mittens made using this technique usually come from northern Europe, particularly Iceland, Sweden and Finland.¹⁶ Other parts of outfits worked in *nålebinding* technique have also been found. For example, a sock dated to the 10th century was found in York, UK¹⁷.

Another specimen undoubtedly being the remains of a garment is find inv. no. 1950/6779 (Fig. 2). The find is a piece of woolen cloth, woven in 2/1 twill and sewn in the shape of a tube. It is about 35 cm long, from 33 to 42 cm in circumference. The narrower edge is evenly cut along

¹² My thanks are due to the Archaeological Museum in Gdańsk for permission to use the textile material from his site.

¹³ J. Kamińska, A. Nahlik, *op. cit.*

¹⁴ B. Kościński, H. Paner, *Nowe wyniki datowania grodu gdańskiego. Stanowisko I, wykopy I-V*, [in:] R. Barnycz – Gupieniec, *Planigrafia materiału zabytkowego z osady podgródowej wczesnośredniowiecznego Gdańska (stanowisko I)*, Gdańsk 2005, p. 10.

¹⁵ J. Kamińska, A. Nahlik, *op. cit.*, p. 106.

¹⁶ M. Hald, *Ancien Danish Textiles from Bogs and Burials*, København 1980, pp. 304, 306.

¹⁷ P. Walton Rogers, *Textiles, Cordage and Raw Fibre from 16-22 Coppergate*, 'The Archaeology of York. Volume 17: The small finds Fasc. 5', London 1989, p. 342; P. Walton: *Textile Production at Coppergate: Anglo-Saxon or Viking?*, [in:] *Textiles in Northern Archaeology: NESAT III Textile Symposium in York 6-9 May 1987*, eds. P. Walton, J.P. Wild 1990, pp. 61-72.



Fig. 1. Fragment of *nålebinding* mitten. Gdańsk, site 1, find inv. no. 1950/2386 (Photo: Anna Rybarczyk).

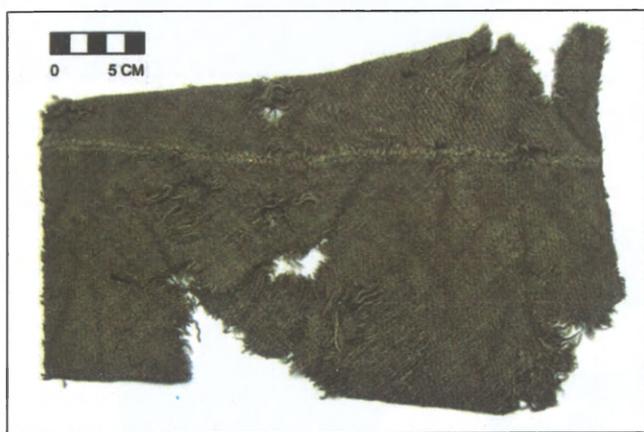


Fig. 2. So-called sleeve. Gdańsk, site 1, find inv. no. 1950/6779 (Photo: Anna Rybarczyk).

a straight line and bears no trace of trimming or sewing in the form of stitches or folds of the fabric. The other end is damaged with no trace of sewing on the frayed edges. Both the size and shape of the find suggest that the specimen is a fragmented sleeve, as it was classified in the 1950s. The preserved shape of the wider edge led J. Kamińska and A. Nahlik to the conclusion that the shape of the sleeve around the armhole was similar to ones found in modern patterns, which would be evidence of the fact that the early medieval inhabitants of Gdańsk possessed a fairly advanced art of sewing¹⁸. However, it must be remembered that the fabric is damaged in this place with no trace of sewing or folding. Thus, the present state of the find may not correspond to the original shape of the sleeve. Therefore the above-mentioned assumption seems to be unjustified. Discussing the find, it may only be noted that a significant detail was overlooked in the study made in the 1950s. The important thing is that the sleeve was cut on the bias. In order to produce a bias-cut garment, a much larger piece of cloth was needed than that necessary to make a straight

grain piece of clothing, where the pattern was laid parallel to either the warp or weft. This waste of material can, however, be balanced by the fact that clothes of this type are better fits and more elastic garments. In the Middle Ages, hose were usually cut on the bias. Thanks to this technique, close-fitting hose did not impede movements. Finds of bias-cut legwear are known from, for example, London¹⁹ and Bocksten, Sweden²⁰. The above remark forces scholars to reconsider the assumption that the find is the remains of a sleeve as it may be a fragment of a hose. Regrettably, no satisfactory answer can be given to this question. However, it can clearly be assumed that bias-cut garments were known and remained in widespread use in Pomerania as early as the second quarter of the 12th century.

Włókiennictwo gdańskie..., among others, contains a description of a large fragment of a dress. Unfortunately, the accompanying photo does not correspond to the information found in the publication. An attempt at verification ended in failure. The find with the inventory number provided turned out to be only a small piece of cloth. Under the circumstances, the relevant excerpt from the publication can only be cited: ‘... (the fragment) found in settlement layer 6 is made from a quality level 3, plain, black, fabric woven in 2/1 weave. The surviving fragment is part of a dress front, 70 cm in length, narrow at the waistline and widening toward the bottom; the shoulder is 17 cm long, the chest breadth is 40 cm.’²¹.

Also, specimen inventory number 1950/2483 is mentioned among other dress finds in the study of textiles from site 1 in Gdańsk. It is a large piece of woolen cloth woven in 2/1 twill²². Although the fabric is partly damaged, traces of folding and sewing are visible on the surface, running along one of its edges. The fabric along the opposite edge is of a different colour and minimal traces of folding are to be seen next to the edge. This side of the textile is more badly damaged, the traces of sewing mentioned above disappear and its frayed edge slopes along a semicircular curve down to the bottom. In the 1950s, this fragment was classified as a bodice²³. To accept this interpretation would mean that the find was the upper panel of a dress with a waist seam, or a kind of jacket. Judging by the relatively long seam considered to be the shoulder seam (about 19 cm long) the find should have been a male garment. However, the weak point of the above interpretation is that the fabric has no traces of armholes or a neckline. The fact that the place where a piece of material is missing is in the shape of a neck opening

¹⁹ E. Crowfoot, F. Pritchard, K. Staniland, *Textiles and Clothing c. 1150-c. 1450*, [in:] *Medieval Finds from Excavations in London*, Vol. 4, London 1992, pp. 185-190.

²⁰ M. Nockert, *Bockstenmaannen, Och Hans Dräkt*, Borås 1997, p. 145.

²¹ J. Kamińska, A. Nahlik, *op. cit.*, p. 219.

²² *Ibidem*, pp. 221-222.

²³ *Ibidem*, p. 221.

¹⁸ J. Kamińska, A. Nahlik, *op. cit.*, p. 221.

seems to be an insufficient assumption and no dress reconstruction can be made using this information. Originally, the fabric may not have had any cut out openings and in the presently damaged place the edge may have run along a straight continuous line. If this is the case, the above-discussed fragment may have been, for instance, a gusset adding breadth to a dress. The opposite edges of the find with the traces of sewing could have been sewn together forming a sleeve. Regardless of the above reservations, the find is clearly a fragment of clothing.

Among the most interesting finds from site 1, the decoratively embroidered textiles deserve special attention. The first specimen is a fragment of a woolen cloth woven in 2/2 twill, about 12x16 sq cm in size, ornamented with embroidery chain stitches. The zoomorphic ornament is most probably a representation of a rooster. Regrettably, the ornament is incomplete and the head part is missing²⁴. The embroidered picture is an approximately 8x6sq cm design. The find comes from settlement layer 4, dated to the first decade of the 12th century.

The second fragment, dating back to the turn of the 11th century, is slightly less interesting. This piece of woolen cloth, woven in 2/2 twill, is covered in lines made with embroidery chain stitches bending at a right angle²⁵. The two fragments may be the remains of garments. Unfortunately, we have no evidence to support this hypothesis.

Undoubtedly, colour ribbons were an addition to medieval dress. In the majority of cases, the original function performed by ribbons unearthed in cultural layers cannot be precisely established. Some of them could have been used by their owners to decorate the head or add flair to a hairstyle. They might have also been worn on clothes around the waist. Nearly thirty finds of this type were identified among the textiles discovered on site 1 in Gdańsk²⁶. Undoubtedly, an early-12th century silk braid is one of the most interesting discoveries. This specimen, 13 mm in width, is a 1/1 tabby with an additional weft made with a silver²⁷ plated thread. The decorative thread runs the whole width of the band forming a pattern on the outer surface²⁸. A narrow, 1.5cm in width and 40cm in preserved length, braid, stands out among other specimens (Fig. 3). This find, the only one worked using the *sprang* technique, dates back to the second decade of the 12th century²⁹.

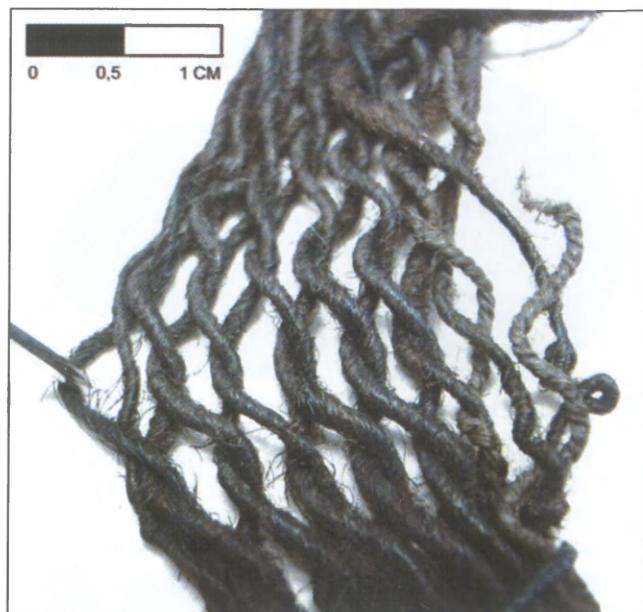


Fig. 3. Sprang braid. Gdańsk, site 1 (Photo: Anna Rybarczyk).



Fig. 4. String with an tassel. Gdańsk, site 1 (Photo: Anna Rybarczyk).

Among the large number of archaeological textiles discovered during the excavations conducted in Gdańsk in the 1950s, there is a rich collection of cords and strings. The most delicate and ornamental finds can clearly be classified as fragments of ancient dress. In the Middle Ages strings had a variety of uses: There were strings for fastening the cloak, laces used in close-fitting, lace-up dresses or, in the Late Middle Ages, doublet string fasteners. Undoubtedly, among the finds from Gdańsk, the silk strings and an early-12th century string with an ornamental tassel (Fig. 4) attached at the end deserve special attention. A string of this type, serving as a fastening of a Teutonic cloak, is depicted in the painting on a wing of the Vierge Ouvrante from the St Mary of the Visitation Parish Church in Sejny.

Besides the above-mentioned braid and strings, five other fragments of costly silk fabrics which may be remains of ancient clothing were found in Gdańsk. All of them have survived in the form of narrow (2-4cm in width) strips

²⁴ *Ibidem*, pp. 105, 127.

²⁵ *Ibidem*, p. 121.

²⁶ *Ibidem*, p. 23.

²⁷ The issue of silver plater used in medieval textiles was recently discussed by Małgorzata Grupa (*Jedwabne wstążki z średniowiecznego Gruczna*, „Pomorania Antiqua”, Vol. XXII: 2009). According to this author, metal plates of this type have wrongly be considered silver ones. In reality only gold plates were used.

²⁸ J. Kamińska, A. Nahlik, *op. cit.*, p. 110; J. Maik, *Wyroby włókiennicze...*, pp. 92-93.

²⁹ J. Kamińska, A. Nahlik, *op. cit.*, p. 131.

of fabric, 15-28cm in maximum length³⁰. The ribbon-like shape of all the silk finds discovered on the site suggests that these expensive, imported fabrics may have been used for trimming woolen garments.

Another group of finds worth considering are fragments of felt. Regrettably, the fragmented specimens are too small to establish whether they were connected with clothing, which, however, seems to be highly probable. Find 1954/6005 is an exception in respect of size. It is a 60x40 sq cm sheet of felt. In addition, the authors of *Włókiennictwo gdańskie...* mention fragments of felt shaped like human feet, which may have been shoe inserts³¹. It is unclear whether the inserts were originally cut out in the shape of a human foot or whether they were simply loose pieces of fleece put into shoes, which gradually got felted as a result of wear and tear.

In addition, among the archaeological textiles discovered, there were fabrics woven from horsehair. According to J. Kamińska and A. Nahlik³², the finds were so-called cilices or hairshirts, worn as a sign of repentance or atonement. However, the hypothesis that they were simply technical fabrics used for packing goods seems to be much more probable. The latter explanation appears plausible especially if we take into consideration the fact that Gdańsk was a port city.

Small sacks worn, for example, around the neck may also be regarded as an addition to contemporary attire. Four finds of this type were unearthed on site 4 and, because of their contents – a tiny amber cross, a beaver's tooth, a piece of moss – associated with the religious sphere and classified as cult objects. In one case, two small sacks were attached to a two-coloured (red and the natural colour of light wool) string, about 80cm in length. The bigger one, 9.5x10sq cm, was made from striped, woolen cloth. The second one was oblong in shape, wider at the base (2.5 cm) and tapered at the top, 8 cm in length, made from a different type of striped fabric with a narrow red stripe running across. Another small sack was made from the same kind of fabric. It was different from the objects described above as it was trimmed with a silk thread. The last find of this type was made from plain felted cloth and trimmed with three rows of dark, possibly originally red, stitches. The sack is 7.5 cm long and very narrow: wider at the base (2 cm) and tapered at the top (1 cm). All the sacks date back to the first half of the 12th century³³.

Finally, a large set of multi-coloured, chequered and striped, woolen fabrics coming from site 1 in Gdańsk are also worth mentioning. Despite lack of direct evidence in the form of preserved parts of clothing made from such fabrics, it may be assumed that textiles of this type were readily used by medieval inhabitants of Gdańsk for sewing clothes.

Both rich iconographic material, for example, illuminations in the Manesse Codex and the Heidelberg Sachsenspiegel, and a find of a sleeve made from woolen chequered fabric dating back to 14th-century London suggest that fabrics of this type could successfully be used for producing garments³⁴.

A fragment of a silk fabric from Gdańsk-Oliwa, woven in 1/1 tabby with an additional weft made from a thread covered with a silver tape, is also connected with clothing³⁵. The find comes from a 13th-century burial of a young, 15-18 years old, woman. On the skull, the remains of a headband with four silver coated bronze temple rings were discovered. Temple rings were symmetrically placed, two on each side of the head³⁶.

Another interesting set of finds comes from recent archaeological excavations conducted on the Isle of Granaries in Gdańsk. Three of the specimens deserve special attention. The first object is the bottom part of a sleeve made from a two-ply woolen tabby and dating from the close of the Middle Ages. The narrow sleeve was fastened with buttons – 11 buttonholes stitched with a light, silk thread have remained on one edge and places where 7 buttons were sewn on are still visible on the other. The sleeve edge is stitched with a two-thread seam.

A narrow strip of a woolen tabby, 51x3sq cm in size, dating back to the same period, is also the remains of a garment, probably a buttoned up dress or kind of jacket. Along the length of the find there are 25 square buttonholes. Traces of white stitching have survived on three of them. The buttonholes are 2cm long each.

The third find is similar in character. It is the remains of a buttoned up dress, made from a 2/1 woolen twill. The surviving part of the garment is a fragment of the fastening and two gussets sewn into the piece of clothing to make it wider. On the narrow strip of fabric which was originally the edge of the dress fastening a single woolen button, 1.7 cm in diameter, has survived. Traces of 14 other buttons are also visible. Remains of a white thread used to sew on the buttons to the dress are to be seen every 2-6 cm³⁷.

Excavations conducted in Wolin provide further information on medieval dress. Among the rich archaeological textiles coming from various parts of the Old Town (excavations 4-8), fragment number 119b/55, dating back to the second half of the 9th century, deserves special attention. The find is a 2/2 twill with a few strands of fleece woven into the fabric. Find number 60 is another fragment of this

³⁴ F. Pritchard, *Patterned Cloths from 14th-century London*, [in:] *Textiles in Northern Archaeology: NESAT III textile Symposium in York 6-9 May 1987*, eds. P. Walton, J. P. Wild, London 1990, pp. 155-164.

³⁵ J. Maik, *Wyroby włókiennicze na Pomorzu...*, p. 86.

³⁶ B. Lepówna, *O początkach Oliwy i zaginionych grobowcach książąt wschodniopomorskich*, [in:] *Z otchłani wieków Pomorza Gdańskiego*, Gdańsk 1998/1999, p. 129.

³⁷ J. Jabłońska, *op. cit.*, pp. 201-214.

³⁰ *Ibidem*, pp. 106-110.

³¹ *Ibidem*, p. 230.

³² *Ibidem*, p. 224.

³³ *Ibidem*, pp. 128, 145, 229-230.

type found in Wolin. This specimen, dating from the turn of the 9th century, was woven in 2/1 twill³⁸. Fabrics of this type, so-called shaggies, are widely known from both archaeological and ethnographic sources and usually associated with warm, rainproof outer coverings. Similar specimens come from Scotland³⁹, Sweden⁴⁰ and Greenland⁴¹. Therefore, the find may be a Scandinavian import or a textile copied from Scandinavian fabrics.

Narrow, 2-3cm wide, strips of silk fabric were probably used for trimming clothes. Among the five specimens of this type discovered, there were three pieces of patterned material, called *samitum* in the Middle Ages. Such fabrics had two warps, the binding and the figure warps, as well as two wefts forming the background and pattern. The remaining finds from Wolin are 1/1 tabbies. It may only be noted that two of the above described fabrics, the *samitum* and a tabby, are sewn up together. All the finds discussed here date back to the 9th and the first half of the 10th centuries⁴².

Among the Wolin finds there is also a piece of felt dating from the 9th-10th century⁴³.

Another archaeological site which should be discussed in the present paper is site number 53 in Dębczyno, Pomeranian Voivodeship. Five fragments of textiles, generally dated to the 11th and the close of the 12th centuries, were discovered at a skeletal burial site. The 11th-century woolen fabrics unearthed in graves 2, 18 and 25 have survived to our times in the form of mineralized material, as fragments adhering to the remains of sheeves and knives. It may be assumed that the remains, surviving thanks to the preserving properties of iron oxides, are remnants of small sacks which used to be attached to belts. Most probably, they were all tabbies. The kind of weave used in the sack found in grave 25 is disputable. A multi coloured woolen braid used as a belt was discovered in the same grave. The find is a tabby. The warp yarn, dyed black, and the dark yellow and brown weft form a delicate striped pattern. The two-thread stripes run at regular intervals, every eleven threads⁴⁴.

The last and most spectacular find from Dębczyno comes from grave 17, the so-called princess' grave, and dates back to the end of the 12th century. It is a woolen band decorated with a gold tape. The headdress was discovered together with six temple rings, symmetrically positioned on both sides of the head. Two wire temple rings and a single Pomeranian type hollow one, were sewn on each side⁴⁵.

Another extremely interesting ribbon comes from the grad in Junkrowy, dated to the period between the turn of the 8th and the 11th century. This silk ribbon was made using the *sprang* technique. The treads were covered in a silver tape. The remains of a thick, silk thread woven into the fabric suggest that the ribbon's edge was trimmed with fringes⁴⁶. The exact function performed by the ribbon is difficult to establish. It may, however, be assumed that the find was part of a garment.

A number of fabrics which can enrich our knowledge of medieval dress were discovered at the cemetery in Gruczno, near Świecie, Kuyavian-Pomeranian Voivodeship. Although the majority of burials date back to the 12th century, the cemetery remained in use from the mid-11th to the second half of the 13th century⁴⁷. A few fragments of fabrics with buttons were unearthed in graves 84 and 275 and some remains of richly ornamented ribbons come from graves 247 and 927.

Grave 84 is a burial of a young, 25-30 years old, woman. The grave dates from the period between the mid-12th and the first decades of the 14th century. A tiny piece of fabric (according to the documentation, woven in broken twill), 2.5x1 sq cm in size, was discovered next to the cervical vertebrae. Regrettably, the three bronze buttons which were originally sewn up to the fabric have not survived in the museum collection. Information about a small opening made in the fabric can be found in the inventory description⁴⁸. Unfortunately, it remains unclear whether the hole was made deliberately or whether the material was simply damaged in this place. Undoubtedly, the find is the remains of a garment. The fabric seems too delicate to be the remains of a piece of outerwear. It might have been a type of tunic with a buttoned up neck. However, its original function cannot be precisely defined.

Grave 275 is also burial, though the woman buried here was older, 45-50 years of age. The grave was broadly dated to the period between the beginning of the 9th and the end of the 14th century. Two relatively small fragments of a tabby were found here. A tiny round bronze shank button was sewn up to one of the pieces, about 1cm from its edge⁴⁹. Interestingly, the majority of buttons coming from later medieval garments, dated to the 14th-15th centuries, were attached to the clothes directly on the material's edge, as evidenced by, for example, archaeological textiles found in London⁵⁰

³⁸ J. Maik, *Wczesnośredniowieczne wyroby...*, p. 164.

³⁹ A.S. Henshall, *Early Textiles Found in Scotland*, [in:] *Proceedings of the Society of Antiquaries of Scotland*, vol. 86, Edinburgh 1954, pp. 5, 18.

⁴⁰ A. Geijer, *Die Textilfunde aus den Gräbern*, [in:] Birka, vol. 3, Uppsala 1938, p. 22.

⁴¹ E. Østergaard, *Woven into the Earth*, Aarhus 2004, p. 74.

⁴² J. Maik, *Wczesnośredniowieczne wyroby...*, pp. 166-167.

⁴³ *Ibidem*, pp. 155, 167.

⁴⁴ A. Sikorski, *op. cit.*, p. 161.

⁴⁵ A. Sikorski, *op. cit.*, p. 166.

⁴⁶ A. Szymańska, *op. cit.*, p. 290.

⁴⁷ R. Boguwolski, L. Hyss, *Biżuteria średniowieczna z cmentarzyska w Grucznie*, Grudziądz 2005, p. 35.

⁴⁸ L. Grzeszkiewicz, *Wyposażenie grobowe wczesnośredniowiecznego cmentarzyska w Grucznie, woj. Bydgoszcz (stanowisko I)*, a typewritten copy of a master's thesis, Toruń 1984, p. 24; plate 4.2. The work used by permission of the Museum in Grudziądz.

⁴⁹ *Ibidem*, p. 40; plate 4.2.

⁵⁰ E. Crowfoot, F. Pritchard, K. Staniland, *op. cit.*, pp. 183-184.

and Tartu, Estonia⁵¹. Regrettably, the documentation contains no information about the place where the fabric was discovered in the grave. Consequently, no conclusion can be drawn regarding the part of clothing it comes from.

A silk band, 1.8 cm wide and 44 cm in preserved length, decorated with a gold thread, was found in grave 247, dating back to the 12th century. The gold thread forms a number of slanting stripes and the middle part of the ribbon is decorated with a zoomorphic design, possibly representing a griffin⁵².

Another ribbon comes from grave 921. The ribbon is woven from untwisted silk yarn and ornamented with a gold thread. The design consists of an arrangement of quadrangles with a triangles-surrounded heart in the middle⁵³. The specimen, 1.4 cm in width, was produced using tablets⁵⁴.

A number of archaeological textiles dating back to later medieval periods come from excavations carried out in Kołobrzeg. From the point of view of the present paper, the remains of a footwrap discovered together with a shoe, seem to be the most interesting. The footwrap was made from wool woven in 1/1 tabby and dated to the third quarter of the 13th century⁵⁵.

Most probably, a silk ribbon found in a layer dating back to the end of the 13th century was also part of a garment. This relatively broad tape, undyed, 8 cm in width, was made in 1/1 plain weave. Despite the use of a simple weave, it is a high quality fabric. Characterised by high density (54 warp threads per 44 weft threads per 1 sq cm), the fabric is extremely delicate and transparent. It may be assumed that the ribbon was used in female dress as a hairstyle addition or part of a head covering⁵⁶.

A few of the textiles found in Kołobrzeg are decorated with colour stripes. Although there is no convincing evidence that these fabrics were used for making clothes, their colouring is worth examining. Wool in natural colours or gray dyed wool was a background for the colour stripes. The following ornamental stripes were used: broad – red, or red and yellow, narrow – red, or red and black, as well as black stripes of different widths. Fabrics decorated with stripes in various shades of red and brown and of different widths are also worth mentioning. The dyed sections are always woven in different weave. The visual effect consists in a change of both the colour and texture of a textile⁵⁷.

Finally, three pieces of felt were also found during excavations in Kołobrzeg⁵⁸. Although the finds cannot be associated with any particular parts of attire, the presence of felt in the archaeological material from Kołobrzeg should not be overlooked.

It is difficult but recognising particular pieces of clothing among the archaeological textiles found during excavations is still possible. The present paper suggests that fabrics unearthed on the majority of excavated sites in Pomerania include textiles which can clearly be regarded as fragments of medieval garments or dress additions.

Archaeological evidence gives us an insight into the variety of techniques used in the creation of pieces of dress in the Middle Ages. Besides ordinary weaving, *nålebinding*, *sprang*, as well as tablet weaving should be mentioned here. Excavations in Gdańsk indicate that bias-cut garments were in use. In order to decorate contemporary clothing, colour effects, like motives of stripes, colour braid and string additions as well as pieces of embroidery, were applied. Garment edges used to be trimmed with silk or colour woolen threads. Felt artifacts are known to have been in use in Pomerania as early as the beginning of the Middle Ages, though no finds which could clearly be classed as parts of garments have so far been discovered.

Even the tiniest fragments of ancient dress help us gradually fit together the different pieces of the jigsaw puzzle depicting fascinating, colourful medieval attire. Among the archaeological textiles discovered, there are both a simple woolen footwrap, once belonging to an ordinary town dweller, and expensive gold ornamented headdresses, the property of wealthy women.

Generally speaking, the present paper deals with finds dating from the early phases of the Middle Ages, which is a result of the availability of such textiles. They frequently come from relatively early excavations, where no proper attention was paid to more recent archaeological cultural layers and the finds they contained.

Hopefully, the latest large scale excavations which have been conducted in urban agglomeration areas will fill these gaps in the source base and open up a new field of further study of medieval dress.

Translated by Zuzanna Poklewska-Parra

⁵¹ R. Rammo, *Kangas Hansalinnas*, Tartu 2009, p. 33.

⁵² M. Grupa, *op. cit.*, p. 215.

⁵³ R. Boguwolski, L. Hyss, *op. cit.*, p. 25.

⁵⁴ M. Grupa, *op. cit.*, p. 215.

⁵⁵ J. Maik, *Wyroby tekstylne...*, p. 262.

⁵⁶ Idem, *Słowiańskie tkaniny...*, p. 304.

⁵⁷ Ibidem, p. 304.

⁵⁸ Idem, *Tekstyli...*, p. 223; Idem, *Wyroby tekstylne...*, p. 264.

Streszczenie

Odkrycia kompletnych lub prawie kompletnych ubrań są niestety bardzo rzadkie, ale mimo wszystko czasem wśród skrawków pozyskanych wykopaliskowo tkanin można wyróżnić fragmenty, co do których istnieje pewność, że swego czasu miały swe zastosowanie w stroju. W pochodzącym z Pomorza materiale wykopaliskowym można znaleźć na przykład zapięcie sukni, rękaw, czółka, rękawiczkę czy onucę.

Odkrycia archeologiczne dają wgląd w różnorodność technik wykorzystywanych przy tworzeniu elementów składających się na ubiór w wiekach średnich. Oprócz tkactwa, wymienić można ścieg igłowy, *sprang*, czy tkanie na krosienkach tabliczkowych. Wykopaliska gdańskie

dowodzą stosowania kroju ze skosu. O dekoracyjności średniowiecznych ubiorów świadczy używanie efektów kolorystycznych – stosowanie motywu pasów, urozmaicenie stroju barwnymi krajkami i sznurkami, czy wreszcie zdobienie haftem. Brzezi ubrań czasem wykańczano ozdobnymi jedwabnymi lamówkami, lub też kolorowymi niciami wełnianymi. Wiadomo, że co najmniej od wczesnego średniowiecza znane były na Pomorzu wyroby pilśniowe.

Należy oczekiwać, że badania prowadzone obecnie na szeroką skalę na terenach aglomeracji miejskich dostarczą nowych interesujących materiałów i tym samym otworzą pole dla dalszych badań nad odzieżą średniowieczną.