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## THE HALLSTATT TEXTILES FROM THE BI-RITUAL CEMETERY IN ŚWIBIE

## ABSTRACT

Textile production during the Hallstatt period was an integral part of everyday life of societies living in Poland. However, discoveries of fabrics are very rare. Textile remains from this period survived primarily in the skeletal bi-ritual graves in the Silesia voivodship. Among preserved fragments of organic finds, remains of clothes and elements of accessories can be distinguished. The best-preserved and well-studied textile remains come from the cemetery in Świbie, Gliwice district. The locality was accidentally discovered in 1930s, but regular excavations started there thirty years later. As a result of the archaeological works, 576 cremation urns and skeletal graves were explored providing a rich set of materials. Grave goods were local products, as well as imports from Southern and Western Europe. Sixty three

graves contained remains of textiles. The majority of the surviving fabrics adhered to metal outfits. In addition, research encountered woven tape remains, braided ribbons, threads, and strings.

The material acquired from the cemetery in Świbie is the largest textile collection from the Hallstatt period discovered in Poland. It waited in a museum warehouse until the year 2015 when the Institute of Archaeology and Ethnology of the Polish Academy of Sciences in Łódź initiated further studies. Despite the fact that most fragments were small and mineralised, all the undertaken analyses led to a better understanding of textile production in the Hallstatt period in Poland with its innovative and traditional elements.

## STRESZCZENIE

## TEKSTYLIA HALSZTACKIE Z CMENTARZYSKA BIRYTUALNEGO W ŚWIBIU

Cmentarzysko w Świbiu, w powiecie gliwickim (wcześniej Schwieben, Kr. Gleiwitz) odkryte zostało przypadkowo w latach 30-tych XX wieku. Regularne badania podjęte zostały 30 lat później przez pracowników Muzeum w Gliwicach. W efekcie przeprowadzonych prac archeologicznych przebadano 576 grobów ciałopalnych i szkieletowych, które dostarczyły bogatego zbioru materiałów. Wśród darów grobowych znajdowały się wyroby o charakterze lokalnym powiązane z osadnictwem kultury łużyckiej, jak również importy z regionów południowo- i zachodnioeuropejskich łączone z kręgiem kultury halsztackiej. W świetle najnowszych badań cmentarzysk w Domasławiu i Kietrze wydaje się, iż nekropolię w Świbiu wiązać należy z ludnością halsztackiego kręgu kulturowego, z jej północno-wschodnim odłamek.

Na pozyskany na cmentarzysku materiał archeologiczny składały się liczne wyroby włókiennicze, które poddano analizom surowcowym i technologicznym. Materiały odkryte zostały w 63 grobach szkieletowych, w liczbie 180 fragmentów. Składały się na nie fragmenty tkanin, nici, sznurków oraz plecionych wstążek. W większości przypadków zachowały się one w postaci niewielkich fragmentów, w sąsiedztwie brązowych i żelaznych darów grobowych, na kościach zmarłych oraz w okolicy drewnianych elementów konstrukcji grobowych.

W zbiorze dominowały fragmenty tkanin (100 sztuk), w większości utkanych z surowca roślinnego. Przeważał splot płócienny, o przędzy pojedynczej, przeważnie skręconej w prawo. Wyroby charakteryzujące się takimi parametrami należą do typowych produktów średniej

jakości, które znajdują liczne analogie na innych stanowiskach z obszaru Polski datowanych na wczesną epokę żelaza.

Drugą co do wielkości kategorię zabytków tworzyły fragmenty plecionych wstążek (38 sztuk) z surowca roślinnego. Przymuszczalnie pełniły one funkcję elementów łączących ze sobą ozdoby metalowe, tworząc wraz z nimi rodzaje naszyjników, gdyż znajdowano je w okolicach klatek piersiowych zmarłych. Odmienną funkcję można przypisać trzem spośród nich, które odnalezione zostały bezpośrednio na kościach czaszek. Stanowiły one wraz z brązowymi guziczkami elementy ozdobnych przepasek czołowych, w starszej literaturze zwanych diademami. Z tymi ozdobami łączyć należy

także fragmenty nici (21 sztuk), które występowały w oczkach brązowych guziczków. Za ich pomocą przyszywano guziczki do podstawy diademu wykonanej z plecionej wstążki (w Świbiu), paska skóry (w Pawełkach, powiat Lublinice) czy tkaniny (w Łabędach-Przyszówce, powiat Gliwice).

Pozyskany na nekropolii w Świbiu materiał stanowi największy dotychczas odkryty i przebadany zbiór wyrobów włókienniczych datowanych na okres halsztacki z terenu Polski. Pomimo iż stanowisko można wiązać z halsztackim kręgiem kulturowym, to w świetle przeprowadzonych analiz tekstyliów nie stwierdzono zmian jakościowych w stosunku do materiałów odkrytych na stanowiskach ludności kultury łużyckiej.

**Keywords:** textiles, cemetery, Early Iron Age, Hallstatt period, Świbie, Silesia

## Introduction

Textile production was an integral part of daily life of the societies inhabiting the territory of modern Poland in the Early Iron Age.<sup>1</sup> However, despite the universal use of textiles, they are extremely rarely found during archaeological excavations. Preserved until the present day only in the form of tiny fragments, they are permanently attached to construction elements of graves or to grave goods. Textiles discovered in bi-ritual cemeteries located in western Lesser Poland, south-eastern Greater Poland, central Silesia, and the central and northern parts of Lower Silesia were preserved in this very form (Fig. 2) (Dobrzańska-Szydłowska, Gedl 1962: 100–102, 121–122; Szczepanek *et al.* 2004: 415–458; Moskal-del Hoyo, Badal Garcia 2009: 243–252; Młodkowska-Przepiórkowska 2010: 141–166; Antosik, Słomska 2017: 89–96).

The richest and the most thoroughly studied bi-ritual cemetery is the one in Świbie, Gliwice district, which is dated to the Hallstatt period (650–450 BC) (Wojciechowska 1996: 513–523, with further references). During more than thirty years of archaeological exploration, a group of organic artefacts has been acquired that formed a set of textiles which accompanied the deceased in their final journey.

Traditionally, the cemetery has been linked to the settlement of the people of the Upper Silesia-Lesser Poland

(*górnosłasko-matopolska*) group of the Lusatian culture, which occupied the territory of south-western Poland since the fifth period of the Bronze Age until the Hallstatt D (900–450 BC) period. It was distinguished on the basis of its funeral customs that involved both cremation and inhumation burials.

The outcome of the latest archaeological research inclines us to verify our views. It suggests that a part of Silesia and southern Greater Poland was inhabited in the beginnings of the Iron Age (650–550 BC) by the people of the Hallstatt culture, namely its north-eastern group (Gediga 2013: 383–399; 2014: 15–25, with further references). This conclusion is supported by numerous archaeological finds related to the Hallstatt circle that were discovered in Domaśław, Wrocław district (Józefowska, Łaciak 2012: 463–482), Milejowice, Wrocław district (Kopiasz 2008: 211–228), and Kietrz, Głubczyce district (Gedl 2002: 75–116). It is preliminarily assumed that the cemetery in Świbie might have also belonged to the Hallstatt culture. This view, however, needs precise verification and further research.<sup>2</sup>

The site no. 16 in Świbie, Gliwice district,<sup>3</sup> was accidentally discovered in the 1930s. The first archaeological excavations there were conducted by the German archaeologist F. Pfütenreiter. It was then that cremation and inhumation graves were found (Pfütenreiter 1936). Regular exploration was only launched three decades later

<sup>1</sup> The text is based on the poster *Hallstatt Textiles from Poland: Analysis of Textile Finds from the Bi-Ritual Cemetery in Świbie*, presented at the session 'Tradition and Innovation in Textile Technology in Bronze Age Europe and the Mediterranean', EAA Vilnius 2016.

<sup>2</sup> A monograph on the site is being prepared by the employees of the Archaeology Department of the Museum in Gliwice.

<sup>3</sup> German name of the village: Schwieben, Kr. Gleiwitz.

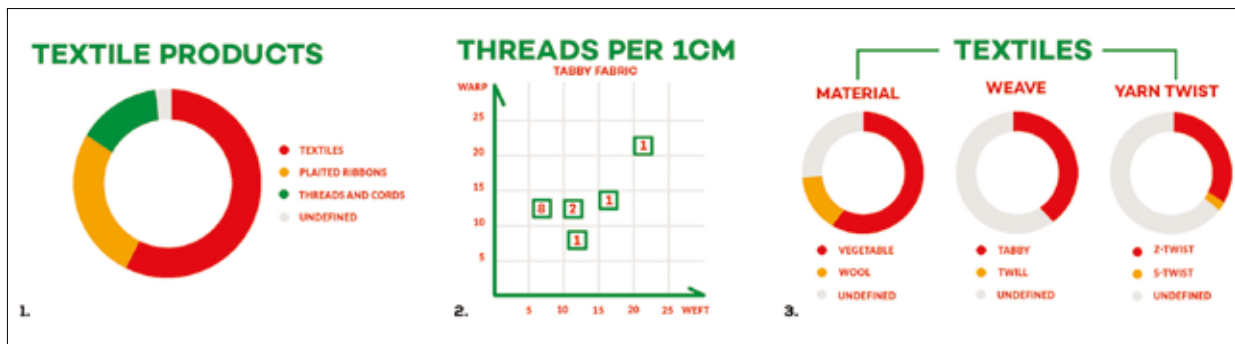


Fig. 1. Textiles from Świbie in statistical charts: 1. Share of particular types of textile products in the collection; 2. Densities of the fabrics, *i.e.* the number of threads in warp and weft per cm; 3. Share of individual types of raw materials, types of weaves, and yarn twists in a set (compiled by J. Słomska).

by employees of the Archaeological Department of the Museum in Gliwice.<sup>4</sup> As a result, as many as 576 cremation and inhumation graves were explored. The majority of the archaeological finds were situated in the richly-furnished inhumation graves that contained ceramic vessels and metal products, mostly decorative items, less often tools and weapons. The ceramic vessels were deposited above the heads of the deceased in the form of a set consisting of a pot, a bowl, and a cup. On skulls, there were headbands (or diadems) made of textile or leather straps, to which bronze buttons and temporal pendants were sewn as a decoration. Below, around the neck area, necklaces, glass bead collars, and earthen or bone pendants were found. Pins and *fibulae* were situated near the chests. They were made of bronze and iron, similarly to bracelets on the arms and greaves around the ankles. The grave goods also included rare tools, such as iron axes and spearheads, and bronze arrowheads (Michnik, Zdaniewicz 2014: 79–80). These artefacts were either local products or imported items from the Eastern Alps, Pannonia, and northern Italy (Stankiewicz-Węgrzykowska 1972: 49–60; Michnik, Zdaniewicz 2014: 29–31).

### Textiles from Świbie

The grave finds also included remains of textiles that were discovered in 63 inhumation graves. They were preserved on remains of bones, wooden construction elements of the graves, and metal elements of clothing. Apart from woven fabrics, remains of woven bands, plaited ribbons and threads, and cords were found (Fig. 1).

These finds form the largest discovered and studied set of Early Iron Age textiles from the territory of modern Poland (Fig. 2). It consists of a total of 180 textiles including threads and cords (Słomska, Antosik forthcoming).

The largest group of artefacts consists of 100 fragments of woven fabrics (Fig. 3.1–2, 4–5) that together constitute 57% of the entire set (graves nos 76, 81, 102, 125, 141, 143, 159, 164, 170, 228, 241, 257, 259, 283, 349, 354, 395, 400, 402, 403, 449, 554, 574, and 576). Most products were woven of threads made with vegetable fibre (65 fragments). Only 16 fragments were produced with wool yarn, and in the case of 19 artefacts, the material proved indeterminable (Antosik 2015; Słomska 2015).

Tabby is dominant among the woven fabrics as it was identified in 43 fragments. In 30 cases, identical z-twisted yarn in both systems was used. Only one textile contained s-twisted yarn made of two very low twisted plies that were rather loosely twisted together. Furthermore, in the case of six textiles, only z-twisted yarn for one system was all that could be determined (Antosik 2015; Słomska 2015).

The thread diameter was established for 26 fragments of woven fabrics. Most of them (15 fragments) were made with yarn whose diameter ranges between 0.8 and 1.0 mm. Nine fragments were woven with threads whose diameter oscillates around 1.0–1.2 mm (Antosik 2015; Słomska 2015). It should be emphasised that such parameters are typical for yarn of medium quality in the Iron Age in Poland (Maik 2012: 295–297; Antosik, Słomska 2014: 103–109).

The analyses also determined that the examined woven fabrics have thread counts of 6–16 threads per 1 cm. Most

<sup>4</sup> Since 1961, archaeological research was conducted by A. Stankiewicz-Węgrzykowska, and since 1967 by H. Wojciechowska.

The two scholars continued the research as a team until 1992.

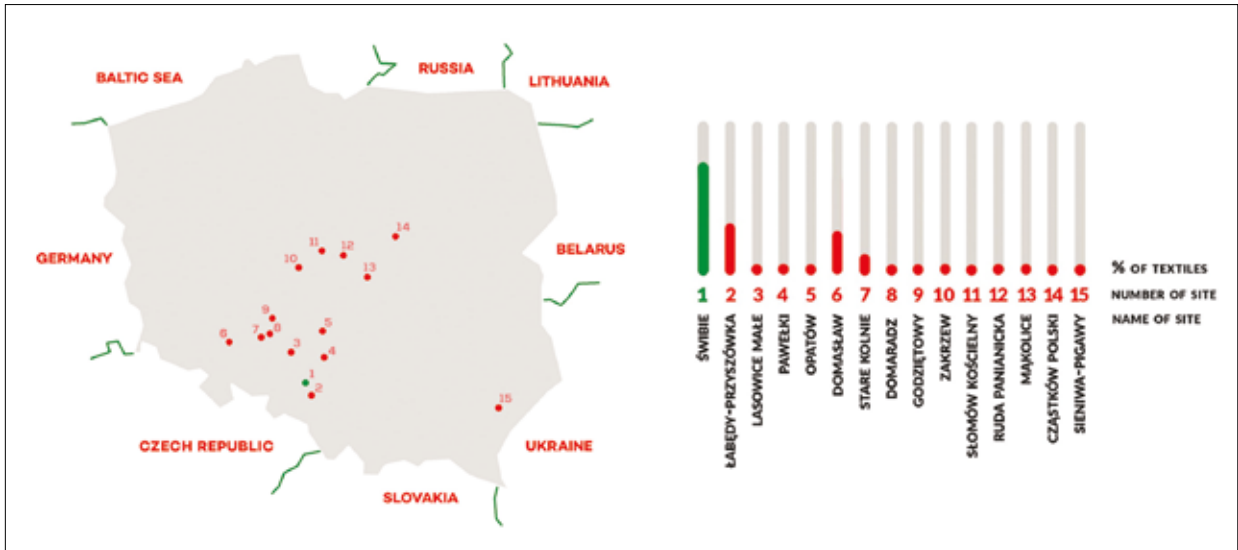


Fig. 2. Textiles from Świebie as compared to other textile finds from the Early Iron Age from Poland (compiled by J. Słomska).



Fig. 3. Examples of textile products discovered at the cemetery in Świebie (photo by J. Słomska): 1. Fragment of a woollen fabric from the grave no. 170 preserved on an iron bracelet; 2. Fragment of a woollen fabric from the grave no. 125; 3. Woven ribbons made of vegetable raw material; 4. Fragment of a woollen fabric from the grave no. 449 preserved on iron greaves; 5. Fragment of a vegetable fabric preserved on a bronze pin in the grave no. 474; 6–7. Woven plant ribbons preserved on bronze rings from the graves nos 125 and 412.

artefacts, however, have the thread counts of 6–10 threads per 1 cm in both systems (Antosik 2015; Słomska 2015).

Apart from the woven fabrics, also 21 fragments of threads or cords made of vegetable fibre were found in the graves. The artefacts from this category constitute 8% of the entire set (graves nos 14, 19, 73, 129, 283, 412, 449, and 480). In this set, products made of two-ply threads twisted together are dominant. Beside them are simple artefacts, too, like one-ply or untwisted products (Antosik 2015; Słomska 2015).

The group of plaited ribbons made of vegetable fibre is rather numerous. It consists of 38 artefacts (Fig. 3.3, 6–7) that make up 22% of all the textile products discovered in the cemetery (graves nos 14, 125, 128, 136, 141, 209, 221, 283, 344, 391, 412, and 418). They were produced in the form of plaited braids found around the skulls and chests of the deceased (Antosik 2015; Słomska 2015).

One interesting find from the cemetery is a fragment of a woollen sprang. It has been published, complete

with a photograph, in *Zarys Historii Włókiennictwa* [An Outline of the History of Textile Production], however, unaccompanied by a more detailed technological analysis (Łaszczewska 1966: 33, Fig. 10). Its location is presently unknown. The artefact is presumed to have been lost or destroyed.

## Discussion

All the aforementioned types of textiles were preserved as fragments. The woven fabrics and ribbons were permanently attached to the surfaces of decorative metal items, and their dimensions usually did not exceed 8 cm<sup>2</sup>. Only one sample of woven fabrics, the one from the grave no. 125 (Fig. 3.2), retained both flexibility and significant size (45 cm<sup>2</sup>), which should be considered an unprecedented find for this period in the territory of modern Poland. While the evidence from the cemetery in Świbie mostly consists of tiny textile fragments, as a set it offers a huge source database for study and comparison. On its basis, we could state that people who used the cemetery in Świbie knew only how to produce fabrics in tabby weave. For that purpose, they used both vegetable and animal material. These woven fabrics were likely elements of clothing, shrouds, or headscarves, as suggested by numerous discoveries on external surfaces of decorative metal items, as well as the co-existence of two different woven fabrics on one artefact, on both of its sides (graves nos 395 and 449) (Słomska 2015).

As for the plaited braids, it is presumed that they joined various decorative metal items to form a necklace. It is the case for the bronze rings located near the chests of the individuals from the graves nos 125, 128, 283,

and 318. These textile products are a unique discovery as they find no counterpart in other sites from the Hallstatt Period in Poland. The closest analogy is provided by the plaited braids from the salt mine in Hallstatt (Grömer *et al.* 2013; Grömer 2016: 72–73).

The situation regarding the threads is somewhat different, as they have been found in large numbers in many sites in this region. In the cemeteries in Łabędy-Przyszówka (Antosik, Słomska 2017: 89–96) and Lasowice Małe, Olesno district (Dobrzańska, Gedl 1962: 121–122), two-ply threads made with vegetable fibre were found. In Pawełki, Lubliniec district (Młodkowska-Przepiórowska 2010: 141–166), and Opatów, Kłobuck district (Szczepanek *et al.* 2007: 641), two-ply threads produced with animal gut were discovered. Independently from the employed material, threads have always been found inside the loops of bronze buttons sewn to headbands (or diadems). The same threads must have also been used for sewing other pieces of clothing.

Despite the theory that the cemetery in Świbie may have been related to the north-eastern circle of the Hallstatt culture, the discovered textiles display technological parameters analogical to the evidence known from the sites of the Lusatian culture. Unlike the case of the evidence from the site in Domasław, Wrocław district (Maik, Rybaczyk 2015: 83–94; 2016: 25–43), the set from Świbie contains less technological characteristics of the Hallstatt culture, such as twill or tablet weaves. The plaited braids may appear as an exception, yet they could hardly be considered examples of innovative textile technology. Consequently, on the basis of the afore-presented artefacts, it is concluded that the evidence from Świbie should be associated with the textile production of the Lusatian culture.

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