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The Silk Road Textiles at Birka: An Examination of the Tabletweoven Bands

by Cathy Ostrom Peters

On the Swedish Island of Björkö, that today lies in Lake Mälaren, is the Viking Age (eighth-tenth century) town of Birka.¹ Between 1871 and 1895 Hjalmar Stolpe excavated approximately 1100 graves in the vast grave-fields lying outside the walls of this town.² Stolpe's excavations provided not only one of the richest quarries for the archaeological interpretation of the Viking Age but revealed the diversity of the approximately 600-900 inhabitants who lived in this international trading town. Among these approximately 1100 graves, were a group of male graves that contained a various array of splendid silk textiles, embroideries and trimmings in gold and silver, bronze and lead buttons, bronze belt mounts, and gold and silver brocaded tabletwoven bands. The confusion surrounding the bulk of these extant textiles and their accessories is their possible Near and Far Eastern provenance. Because of these exotic finds, Birka is known as the Silk Road of the North. My most recent research has been focused on the brocaded tabletwoven bands from the male graves. An examination of these tabletwoven bands and their comparison to other Scandinavian and Western brocaded bands will be the purpose of this paper.

I will begin with some cursory background information on the known trade and travel of the Eastern Vikings; that is, those Vikings living in Sweden and Russia who were known as the Rus'. This will help to explain the wide variety of possibilities for the provenance of these items. I will then introduce the tabletwoven bands, explore their unique materials, and finally, compare them to other extant bands through warp threads, ground weft threads, metallic brocade weft threads, and motifs in an effort to discover their possible provenance.³ I have recently examined the majority of the brocaded tabletwoven bands from both male and female graves that are now conserved at the Statens Historiska Museum in Stockholm. This examination confirmed materials and patterns. I have yet to compare the quality of the weave structures between Groups I and II.⁴

The Sources

¹ Lake Mälaren was formally a part of the Baltic Sea. Today, Birka is approximately 30 km SW of Stockholm.

² Anne-Sofie Gräslund, *Birka IV: The Burial Customs*. 4. Gräslund notes that there are "at least 2300 graves on Björkö."

³ Nancy Spies, *Ecclesiastical Pomp, Aristocratic Circumstance: A Thousand Years of Brocaded Tabletweoven Bands*, 12. I found Nancy Spies suggestion of these criteria for an analysis of brocaded tabletwoven bands to be helpful.

⁴ Agnes Geijer, *Birka III: Die Textilfunde aus den Gräbern*, 92-95. Geiger noted that the bands fell into two categories mainly by design. Egon Hansen, *Tablet Weaving: History, Techniques, Colours, Patterns*. 57-58. Hansen argues that the bands in Group II also show a "hesitation" in the weave. This is not the general hypothesis and a technical analysis comparing the weave structures between Group I and Group II would settle this conjecture.

There are several Arab accounts that note particulars about the trade, travel, and physical appearance of the Eastern Vikings. Ibn Khordadbeh, in c. 885 CE, writes about Vikings sailing down the Caspian Sea and exiting at "Djurdjân."⁵ He explains that they would then pack their merchandise on camels and using eunuchs as interpreters, would make their way to Baghdad.⁶ Perhaps the most famous account of the Vikings comes to us from Ibn Fadlan who describes his meeting with the Rus' at a Northern Bulgar settlement on the Volga in 922 CE. His famous description of a chieftain's funeral includes details about his attire and available textiles. The dead chief wore pants, slippers, ankle-length boots, a tunic, a brocaded caftan with gold buttons, and a brocaded hat trimmed in Marten fur.⁷ He was carried out to a pavilion built in his ship and placed on a Byzantine brocade-covered couch.⁸ These accounts clearly indicate that Vikings had access to foreign merchandise.

Another contemporary source comes from Constantine VII Porphyrogenitus, a learned Byzantine Emperor who ruled from 905-959 CE. He wrote *De administrando imperio* in c. 944CE.⁹ In this book he includes an account of the trade route the Rus' used to get from Novgorod, Smolensk, Teliutza, Chernigov, and Vyshegrad, to Byzantium along the Dnieper river.¹⁰ This information confirms the use of at least this one route from the North to the Mediterranean and includes details of ship building, portaging, and travel time.

Along with these primary sources, there is considerable physical and archaeological evidence for this long distance trade and travel by the Rus'. In Sweden there are more than 2500 rune-stones that were mostly erected between c. 1000-1100 CE.¹¹ Geijer explains that many of these were raised to the memory of the men who had died in "the Österled (Eastern lands); in Gardaríke (Russia), Holmgård (Novgorod), Greece, Miklagård (Byzantium), Jursalia (Jerusalem), and Särkland (Persia)."¹²

The archaeological evidence in Sweden for trade and travel to the east is abundant. The more impressive finds include over 60,000 Byzantine coins and Arab Dirhems,¹³ shells from the Indo-Pacific and the Red Sea,¹⁴ a fifth century bronze Buddha from

⁵ M. J. De Goeje, ed. and trans., *Bibliotheca Geographorum Arabicorum* VI, 116.

⁶ Ibid.

⁷ Paule Charles-Dominique, trans., *Voyageurs arabes: Ibn Fadlan, Ibn Jubayr, Ibn Battuta and an Anonymous Author*, 61-62.

⁸ Ibid. 61. For a good English translation of Ibn Fadlan's meeting with the Rus' see Judith Gabriel Vinje, "Baghdad Chronicles: The Islamic Record of Vikings in the East," *Viking Heritage Magazine*, 13-14.

⁹ Constantine Porphyrogenitus, *De administrando imperio* (Constantine VII Porphyrogenitus, Emperor of the East, 905-959 AD), Gy Moravcsik and R. J. H. Jenkins, ed. and trans., 1967, 46.

¹⁰ Ibid., 57.

¹¹ Rune-stones are not tombstones but commemorative stones erected in memory of a loved one.

¹² Agnes Geijer, *Oriental Textiles in Sweden*, 16. For a full account of Swedish rune-stones see Oscar Montelius, "Svenska Runstenar om Färder Österut," *Fornvännen*, Vol. 9, 1914, 81-124. An English summary of this article can be found in *Viking Society for Northern Research Yearbook*, 1914-1924, 14.

¹³ Colleen Batey, Helen Clarke, R. I. Page, and Neil S. Price, *Cultural Atlas of the Viking World*, 198.

¹⁴ Urve Miller and Helen Clarke, eds., "Environment and Vikings, Scientific Methods and Techniques," *Birka Studies*, 226.

Northern India,¹⁵ runic graffiti on a Greek lion,¹⁶ and graffiti on a marble balustrade in Hagia Sophia in Constantinople.¹⁷

Also pertinent to my research is the information that Vikings served the Byzantine Emperor and were known as the Varangian guard. It is not known when Scandinavians first entered the service of the Byzantine Emperor, but in 1034 CE the Byzantine sources mention Northern warriors as a special guard.¹⁸ Sigfús Blöndal says that "the "Varangian Period, i.e. from the time of Constantine VII [905-959 CE] to the rape of the City in 1204" is more precise.¹⁹ Anthony Cutler explains that "the Varangians were prominent both in field armies and esp. in their role as a palatine corps in Constantinople...."²⁰ He adds that "the Varangian guard was elite, expensive to join, notoriously loyal...and distinctive in physical appearance...dress, and weaponry...."²¹ Therefore, as a result of this information and the primary sources, as well as the physical and archaeological evidence; I believe there is a very real possibility that the textiles and trimmings excavated at Birka are evidence of early trade and travel by Scandinavians in the east.

However, it is this information that has been the cause of so much speculation and controversy. One is left wondering if these men buried at Birka were Viking merchants returning home with splendid goods of silk, gold, and silver. Or perhaps these men retired members of the Varangian guard who had returned home in their uniforms. Or is it possible that these men were Arabs, Khazars, or Bulgars who were on a trading mission at Birka when they died? While these questions remain unanswered, what we do know is that at Birka "...[there are] only about ten [male graves] which don't have some kind of exotic foreign touch to them...and, in total, ninety per cent of the graves at Birka contain remains foreign to Viking Age products."²² Clearly, Birka was an International trading town and possibly a significant destination for foreign merchants.

The Bands

As with the rest of the artifacts at Birka, the tabletwoven bands have enjoyed their share of controversy. When Agnes Geijer documented the textile finds from Birka in 1938, she recorded that of the nearly 170 graves with textiles, approximately 60 graves had pieces of tabletwoven bands.²³ This included both male and female graves. While my research has focused on the male costume, there appears to be no distinction between male and female tablet woven bands except for perhaps their placement on garment(s).

¹⁵ William W. Fitzhugh and Elisabeth I. Ward eds., *Vikings: The North Atlantic Saga*, 108.

¹⁶ Magnus Magnusson, *Vikings!*, 79. One of a pair originally from Piraeus (the port of Athens) and taken during the Crusades. They now sit outside the Arsenal in Venice.

¹⁷ *Ibid.*, 118. Magnusson says that "a few years ago, the great Swedish scholar, Prof. Sven. B. F. Jansson, one of the worlds leading authorities on runic inscriptions, recognized one of the casual graffiti as being runic. Most of it was indecipherable, but he managed to make out, in the opening letters, the ending of a personal name: -A-L-T-A-N, which in full would have read 'Halfdan', 'Half-Dane' both a royal and a common name in the Viking age." 121.

¹⁸ Anthony Cutler and S. C. F., eds., *The Oxford Dictionary of Byzantium*, s.v. "varangians," 2152.

¹⁹ Sigfús Blöndal, *The Varangians of Byzantium*, 177.

²⁰ Cutler and S. C. F., eds., *The Oxford Dictionary of Byzantium*, s.v. "varangians," 2152.

²¹ *Ibid.*

²² Inga Hägg, *Birkas orientaliska prakplagg*, " 209.

²³ Agnes Geijer, "The Textile Finds From Birka," *Cloth and Clothing in Medieval Europe: Essays in Memory of Professor E. M. Carus-Wilson*, edited by N. B. Harte and K. G. Ponting, 93.

All of the tabletwoven bands were brocaded with metal threads and most of the bands displayed several varieties of patterns on the same band.²⁴ Geijer accounted for at least 26 different patterns.²⁵

The bands were woven with a warp either entirely of silk or a combination of a silk outer warp and an inner warp of vegetable material that has disintegrated.²⁶ In every case, the ground weft is completely silk. There is also an additional brocade weft of either gold or silver; and, in two cases at Birka, combinations of both gold and silver threads were used on the same band.²⁷ All of the silk is now a solid brown color but Geijer suggests that originally almost all of the bands were woven in multi-colored silk.²⁸ What is unique about the Birka tabletwoven bands is that the brocade weft threads of gold and silver are actual solid drawn wire threads wound around a cream colored silk core.²⁹ In addition, these extremely fine wires were woven in pairs. In Western tabletwoven bands, brocade threads of gold and silver are hammered flat and then wrapped or "spun" around a core material.³⁰ They are also always woven as single threads.

The Birka bands were catalogued by Geijer into two groups.³¹ Group I comprises the largest group of bands and are numbered B2-B18.³² This group is connected by the similarity of their geometrical motifs and their warp threads that were a combination of silk and vegetable material. These bands were woven in the most common tablet weaving technique using 4-holed tablets and by turning all of the tablets 1/4 turn with each pass of the weft thread. In this group, the brocaded metal patterns appear to cover the entire surface of the bands and only silver metal threads are used. They measure between 0.65 cm to 1.7 cm wide.

Group II includes those bands numbered B19-B26. This group comprises a smaller number of bands with special variations that deserve noting. Group II bands use only multi-colored silk threads and more of the ground weft is exposed. Two of the bands, B20 and B22, use both gold and silver drawn wire threads. B20 is also only partly brocaded and when brocaded the weaver used both gold and silver metal threads in the middle of a pattern. Also unique to this band is its double-edged border. B22 also uses both drawn gold and silver threads. Nine fragments of B23 were found. They were found in nine different graves both male and female. At least two of the graves had bands in the same pattern. In three of the fragments the gold has a reddish tint. In one of the fragments the gold is "spun" gold thread used singly (Western style) in another the drawn gold thread has been flattened by burnishing after weaving to give it a brighter luster.

²⁴ Ibid.

²⁵ Geijer, *Birka III*, 84-90.

²⁶ Perhaps linen or nettle.

²⁷ Grave no. 824. Also, possibly on a band in grave no. 561.

²⁸ Geijer, "The Textile Finds From Birka," 93.

²⁹ Jack Ogden, *Jewellery of the Ancient World*, 46-52. In this chapter, Ogden not only explains the differences between "drawn," and "strip and block twisted," wires and shows there various differences under magnification. 48-49.

³⁰ Spies, 294. "'Spun' thread - a metallic thread formed by spinning a long, usually flat, strip of gold, silver, gilt-silver, gilt membrane, or any other metal around a core thread, usually silk or linen...."

³¹ Geijer, *Birka III*, 92.

³² Geijer, *Birka III*, 75-76. The numbers correspond to the different Band patterns. Band no. 1 from grave no. 963 is entirely unique not only at Birka but in all extant tabletwoven bands for its use of silver and silk together with wool and vegetable threads. It is very deteriorated. Hansen, *Tablet Weaving*. Hansen notes that the combination of these materials in this band "is the only known case in tablet weaving." 59.

A difference in the weave structure is also noted in the Group II bands. The bands are woven by individually turning the tablets, a far more difficult technique that allows for considerable variations in the patterns. Geijer notes that some of the tablets in Group II have been threaded with two colors of thread, two threads of each in each tablet. They are woven by regularly turning the tablets first 1/4 turn forward two times and then 1/4 turn backwards two times giving the band a diagonal texture.³³ Geijer also notes that some of the other bands in Group II appear to have used a different color in each of the four holes of the tablet. By individually turning the tablets, considerable variations in color and pattern are possible.³⁴ Bands B19-B21 show patterns that deviate substantially from Group I. Geijer describes the designs as zoomorphic; one may also see them as foliate.³⁵ They measure between 0.35 cm to 1.3 cm.

The most complete set of tabletwoven bands were found in grave no. 735. The grave contained the remains of a man and a woman. Due to decomposition it was difficult to identify the male and female costume components. However, lying horizontally across the right and left chest quadrants of the male skeleton were large sections of bands sewn to samit.³⁶ The patterns of these bands included B12, B13, B17, B20. Along with other male graves that had fragments of tabletwoven bands lying across the chest and forehead,³⁷ Stolpe's drawings indicated pieces of tabletwoven bands in lengths running from the shoulders down the arm and near the wrists.

The Controversy:

The controversy surrounding the provenance of these bands has to do with the well-documented existence of advanced tablet-weaving in the Nordic countries even before the Viking Age. However, there are no other cases to date of Scandinavian tabletwoven bands with these unique materials and construction type. Hansen notes the uniqueness and fine quality of the weaving in the bands in Group I but sees the bands in Group II as "experiments."³⁸ He suggests their weaving "reveals a hesitation which cannot be observed in the standard bands [Group I]".³⁹ As a result, he believes that these "experiments" are evidence of local weavers learning new patterns using imported materials.⁴⁰

Geijer also notes that the bands in Group I show "uniform technique and quality."⁴¹ And while she would agree that compared to Group I, the bands in Group II are generally uneven in their execution, this is not always the case. She cites B21 and notes that it is woven extraordinarily clear and uniform.⁴² Geijer has waffled over the years as to the provenance of these enigmatic bands. When she first examined the bands in 1938, she

³³ Geijer, Birka III, 92.

³⁴ Ibid.

³⁵ Geijer, Birka III, 84.

³⁶ A west-faced compound twill.

³⁷ Some were now lying between the forehead and the neck but it is most often speculated that these were originally trim from a headdress and not trim around a neck opening.

³⁸ Hansen, 54.

³⁹ Ibid. He admits, however, that further examination of the materials would be helpful. 54.

⁴⁰ Ibid.

⁴¹ Geijer, "The Textile Finds from Birka," 93.

⁴² Geijer, Birka III, 84.

believed them to be Swedish products. In 1979 she revised her conclusions and became "convinced the entire group was imported, probably via Russia, from Byzantium"⁴³ based on their distinct difference in materials and weave structure.

A Comparison of the Bands

A comparison of the Birka brocaded bands to other extant brocaded bands with metal threads through the tenth century confirms the uniqueness of these textiles fragments. The formula for this analysis is to examine warp threads, ground weaves, metallic brocade weft threads, and band designs.⁴⁴ According to Peter Collingwood, the Anglo-Saxon bands from the Taplow barrow, dated to the first quarter of the seventh century, are the earliest tabletwoven bands with both warp and weft threads intact.⁴⁵ They were published by Crowfoot and Hawkes and their examination revealed warp and ground weft threads of "a very fine, well-spun wool".⁴⁶ To produce the brocade, flat, narrow gold strips, cut from gold foil, were used.⁴⁷ The Taplow barrow bands were woven in 4-holed tablets being turned normally the 1/4 turn and their designs were in geometric patterns.⁴⁸

Crowfoot and Hawkes believe the Taplow bands, based on their materials and weave, is evidence of local production.⁴⁹ They say that the "elaborately decorated braids from Taplow barrow were ...[woven] in a tablet weave, a technique well established in England at least as early as the 6th century, and, at present, nothing compels us to think of these as imports."⁵⁰ With wool warps and ground wefts and brocaded with flat gold foil strips, the Taplow barrow bands cannot be compared to the Birka bands with their silk warps and ground wefts and silver and gold drawn wire threads.

Dated to the late eighth or early ninth century, a set of embroideries in gold and silk were discovered in the Aldeneik Abbey, Liège, Belgium. In 1571, these embroideries were moved to the church of St. Catherine in Maaseik, Belgium. These embroideries are falsely attributed to Sts. Harlindis and Relindis, sisters who founded the Abbey of Aldeneik.⁵¹ However, the "so-called casula (chasuble) of Sts Harlindis and Relindis, the velamen (veil) of St. Harlindis and the velamen of St. Relindis... [have] had those names from at least the High Middle Ages, when they were labelled as such in Latin inscriptions."⁵² Each of these three garments are embellished with silk tabletwoven bands brocaded in gold threads.

⁴³ Geijer, "The Textile Finds from Birka," 96.

⁴⁴ Spies, 12.

⁴⁵ Peter Collingwood, *The Techniques of Tablet Weaving*, 14. Collingwood notes that there are other bands using "narrow strips of finely beaten gold" from this excavation and other "Anglo-Saxon and continental Germanic graves, between the 5th and 7th centuries, but they are without their supporting textiles."

⁴⁶ Crowfoot and Hawkes, 44.

⁴⁷ Ibid.

⁴⁸ Ibid., 45. For a nice collection of geometric patterns in brocaded tabletwoven bands from the sixth to the sixteenth centuries see Spies, 82.

⁴⁹ Crowfoot and Hawkes, 57.

⁵⁰ Ibid.

⁵¹ Mildred Budny, "The Maaseik Embroideries," *Medieval World*, 24.

⁵² Ibid., 23.

The bands on the casula decorated eight embroidered panels.⁵³ The warp threads are beige or red and beige silk (possibly some linen).⁵⁴ The ground weft is not indicated and the brocade weft is "spun" gold. Mildred Budny published the Maaseik embroideries and notes that "the gold threads [on all of the bands] are made of narrow strips of pure gold foil wound around a core of horsetail hair."⁵⁵ The designs on the casula bands display a variety of geometric motifs.⁵⁶ Spies notes "eight...motifs based on the diagonal, such as 'armed' diagonals, chevrons, diamonds, hearts, and swastikas."⁵⁷ The bulk of the Birka bands are pattern in these same geometric motifs but the materials vary significantly.

The velamen of St. Harlindis has tabletwoven bands of silk (one assumes both warp and ground weft here as it is not specified)⁵⁸ with the brocade weft in the same "spun" gold as in the bands on the casula. Budny notes that the "braids are decorated with lozenge-and-chevron patterns or with Latin inscriptions."⁵⁹ The surviving band that decorated the edge of the velamen of St. Relindis is noted by Budny as "a fragmentary fringed silk tablet-woven braid."⁶⁰ Spies elaborates by saying that the warp threads are beige silk and the brocaded weft is the same "spun" gold around horsetail hair as used in the other Maaseik bands.⁶¹ She adds that it is patterned in "large diamonds each filled with a saltire (St. Andrew cross)."⁶² Neither the brocade materials or the general motifs on these velamens are a match with the Birka bands.

Budny believes that the Maaseik embroideries are early examples of opus Anglicanum (English work) and made in Southern England.⁶³ She also believes that the provenance of all of the tabletwoven bands is Western European.⁶⁴ Interestingly, she does suggest that the silk used both as the "base-cloth" and the silk used for the appliquéd panels on the velamen of St. Harlindis "probably originated in the eastern Mediterranean or the Islamic world."⁶⁵ In addition, she believes that what survives of the linen from the velamen of St. Relindis was "made in the Coptic world in about the sixth century."⁶⁶ The use of silk and sometimes a vegetable thread mimics the Birka bands. But the use of pure gold foil wrapped around horsetail hair separates these bands not only from the Birka brocaded bands but all other extant tabletwoven bands.

The girdle of St. Witgarius, Bishop of Ausgburg, Southern Germany, is dated between 860 and 876 CE, and is the earliest tabletwoven band that is actually dated.⁶⁷ Its

⁵³ Ibid., 25.

⁵⁴ Ibid. See also Spies, 209.

⁵⁵ Budny, 29. She notes that "among gold-wrapped threads of the early medieval period, the core of horsetail hair is most unusual (a core of silk threads is standard), but it occurs upon all the Maaseik tablet-woven braids in the casula and the velamen, suggesting a shared tradition and perhaps origin." 29.

⁵⁶ Budny 25.

⁵⁷ Spies, 209.

⁵⁸ Budny, 24. Spies indicates that the warp threads are "reddish-plum silk and beige linen." 209. Budny indicates that the fabric to which the bands are attached is a "red and purple brocaded silk base-cloth." 24. It appears that perhaps Spies has simply confused the two velamens.

⁵⁹ Budny, 24.

⁶⁰ Ibid. The entire velamen survives only in fragments.

⁶¹ Spies, 209. I have assumed B is the analysis of the Relindis velamen.

⁶² Ibid.

⁶³ Budny, 23.

⁶⁴ Budny, 24.

⁶⁵ Ibid.

⁶⁶ Ibid., 24-25.

⁶⁷ Marie Schuette, "Tablet Weaving," CIBA Review, no. 117, 23.

inscription reveals that it was a "gift of Hemma, consort of Lewis the German (843-876), to Bishop Witgar or Regensburg (858-887)."⁶⁸ This girdle consists of a center band with two trapezoidal pieces sewn at each end. The warp and ground weft threads of the band are "strong" red silk (green on the edges).⁶⁹ The brocade weft of the whole girdle, center band and trapezoidal pieces, is "spun" gold around a core of white silk (Western type). The center band is decorated in capital letters. The trapezoidal pieces are woven with one eagle on each piece. While the use of silk for both the warp and ground weft threads and for the core of the "spun" gold threads, is similar to the Birka materials, the use of "spun" gold woven singly separates these bands as does their motifs.

Among the several tabletwoven bands found at Mammen, Denmark and dated to the tenth century are eight pieces of brocaded bands. The tabletwoven borders of two wrist bands and four fragments of a band are the best preserved.⁷⁰ Both the warp and ground weft threads are silk.⁷¹ Interestingly, Margrethe Hald notes that two kinds of thread are used for the brocading; a ["spun"] gold brocading thread⁷² and an additional "coarse" silk brocade thread is used to "create a weft pattern as opposed to the usual form of tablet weaving with the warp threads causing the pattern and completely concealing the weft."⁷³ Hald explains that this additional silk thread was "used to make a fine diagonal line, and now and again a little motif on the gold surface."⁷⁴ The "spun" gold thread is wrapped around a silk core and used singly. The main motifs are geometric including Greek key diagonals and diamonds filled with abstracted swastikas.

Margrethe Hald has published the Mammen textiles and believes them to be Danish products woven with imported materials. She suggests that "the advanced weaving techniques (note 70), the motifs, and the usual forms of band and border on fabrics recovered among the archaeological finds in Denmark are generally considered to be of native origin, but the costly and highly sophisticated products of gold and silk is undoubtedly of foreign origin."⁷⁵ Interestingly, the complicated weave structure of the Mammen bands, the "spun" gold brocading with the addition of an extra brocade thread of coarse silk, all woven singly, not only distinguishes these bands from the Birka bands, but again, from all other extant tabletwoven bands.

⁶⁸ Ibid.

⁶⁹ Ibid. I am assuming she is speaking of both the warp and the weft threads here. See also Collingwood, 17, 335-336. He does not mention the green edges. Spies, 237. She says the warp is of red and yellow silk with yellow borders. No one specifically mentions the ground weft threads.

⁷⁰ Margrethe Hald, *Ancient Danish Textiles from Bogs and Burials*, 231-232. Hald suggests all of these are possibly the same piece of tablet-weaving as they are woven in the same technique and are the same width. *A note on the unique preparation of the tablets is worth mentioning here. Hald says that "the arrangement of the warp is as follows: the tablets at each side are threaded with four threads while those in the middle are threaded with two threads through diagonal holes. The tablets are turned so that the empty holes always lie beside the threaded holes of the adjacent tablets. The threads are also threaded alternately from the right and left sides of the tablets." Certainly a more complicated technique than has been seen so far in this examination.

⁷¹ Collingwood, 18; Spies, 216; and, Hansen, 55-56. Hansen is the only one to suggest that there was also the use of vegetable threads in the warp.

⁷² Spies, 216. Spies says that both "spun" gold and "spun" silver threads are used for the brocade in the wrist bands. Hansen agrees that "the original braids were produced in broken weft brocading in gold and silver threads." 67.

⁷³ Ibid.

⁷⁴ Hald, 232.

⁷⁵ Ibid., 233.

The 10th century brocaded bands of St. Cuthbert, according to Spies, were "commissioned and donated by Æflaeda and Bishop Fridestan of ?Winchester, England, for Bishop Wulfstan between 909 and 916, and placed in St. Cuthbert's shrine by King Athelstan in 934."⁷⁶ There are ten bands and they were published by Grace Crowfoot. These ten bands are all woven in silk warp and ground weft threads and brocaded in "spun" gold or "spun" gilt silver wrapped around a core of silk. Interestingly, Crowfoot notes that there are some definite similarities between the Birka bands and the Cuthbert bands. They are both silk brocaded in metal threads. There is the use of silk buttonholes,⁷⁷ and occasionally, some of the bands are trimmed with a plait sewn to the edge.⁷⁸

However, she notes that the gold thread in only one band at Birka is similar to the gold thread used in the Cuthbert bands (i.e. Birka B23). The Cuthbert bands are all woven with gold or silver-gilt threads and the gold is a flattened strip wound round a core and used singly. The brocaded patterns on these ten braids are various geometrical, floral, and animal patterns.

The bands from the shrine of St. Cuthbert, like the bands from Birka, the Maaseik bands, and the Mammen bands, have no comparable extant examples. Crowfoot believes that the silk taffeta to which the St. Cuthbert bands are attached and the patterns of the bands are of Eastern origin.⁷⁹ While one might assume that the bands would be imported as well, Crowfoot suggests that they could just as easily have been copied locally with imported materials.⁸⁰

Finally, the last existing metallic brocaded tabletwoven band from the tenth century is the maniple of St. Ulrich (d. 973 CE), bishop of Augsburg. The maniple was found in his grave in Southern Germany at the Church of Sts. Afra and Ulrich. Reminiscent of the girdle of Witgarius, the warp threads are red and white silk.⁸¹ The ground weft threads are green silk and the brocade weft threads are both a blue silk⁸² and "spun" gold around a core of naturally-colored silk.⁸³ The patterns on the maniple include diagonally criss-crossing ribbons of hyphenated Z's creating diamond-shaped frames. One frame has the words DEXTERA DEI in Roman capitals in mirror writing that reads upwards surrounding a five-fingered hand. Another frame is designed with an armed swastika and yet another with a Celtic interlaces. No conflicting information on the provenance of this maniple, its materials, its construction, or its design is apparent. Lack of information in this area leads one to suppose scholarly acknowledgement of German or Frankish production. Its difference to the Birka bands is apparent.

⁷⁶ Spies, 219.

⁷⁷ Grace Crowfoot, "The Braids," 460. Here she is speaking of the largest set of tabletwoven bands found in grave no. 735. Only one single band from grave no. 735 was available for my examination. However, in Birka III, plates 14 and 15 show the two large sets of tabletwoven bands and these do not show the silk buttonholes.

⁷⁸ Crowfoot, "The Braids," 460.

⁷⁹ Ibid. 460-461

⁸⁰ Ibid.

⁸¹ Collingwood, 18. Spies detects three warp thread colors; red, white, and green. Collingwood says the green silk is embroidered over the tablet weaving. 142. Spies calls the "unspun" silk embroidery thread blue. 237.

⁸² Schuette, 26.

⁸³ Spies, 237.

My research has shown that of the extant metallic brocaded tabletwoven bands from Scandinavia and Western Europe, none can compare to the tabletwoven bands excavated at Birka. While similarities exist between the use of silks threads and geometrical motifs, the complete absence of drawn wire threads in any Scandinavian or Western European examples is worthy of attention. Collingwood points out that the weave structure of the Anglo-Saxon bands, the bands at Birka, and the St. Cuthbert bands all have the "brocading weft [thread] passing under two threads of a cord."⁸⁴ He goes on to point out that the girdle of St. Witgarius, the Mammen bands, and the maniple of St. Ulrich are all woven with the "brocading weft passing under one thread of a cord."⁸⁵ Hansen aptly pointed out that a closer comparison between the weave structures in Groups I and II of the Birka bands was needed.⁸⁶ Additionally, an examination of the spin of the silk threads, dye analysis, metal analysis, and an examination of extant Eastern tabletwoven bands may enhance my efforts to secure the provenance of the Birka bands. What has been established, however, is the clear distinction in materials and motifs between extant early and contemporary Scandinavian and Western tabletwoven bands and those enigmatic bands from Birka.

⁸⁴ Collingwood, 326.

⁸⁵ Ibid., 330.

⁸⁶ Hansen, 58.

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