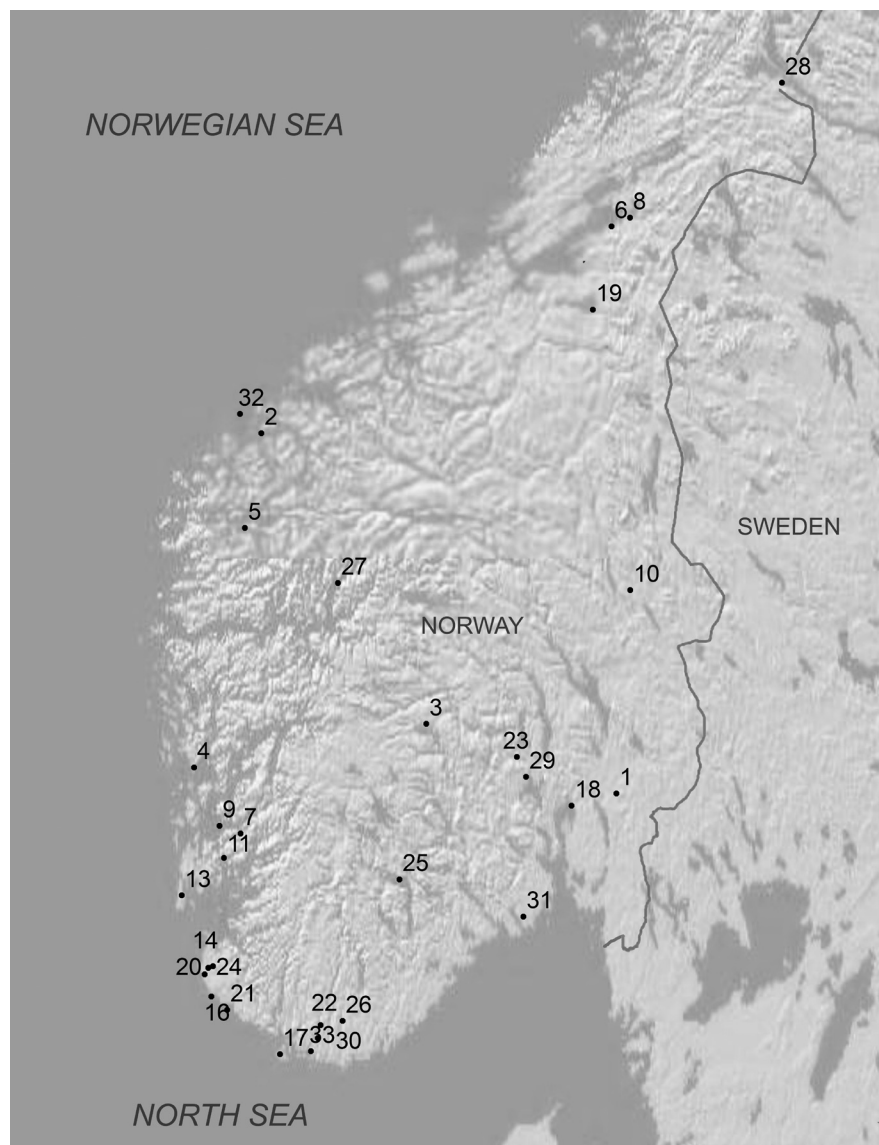


NORWAY

Bronze Age	1800–1100 BC
Late Bronze Age	1100–500 BC
Early Iron Age	500 BC–AD 570
Pre-Roman Iron Age	500 BC–1
Roman Iron Age	AD 1–400
Migration Period	AD 400–570

NORWAY



Sites mentioned in Chapter 13:

- 1 Akershus
- 2 Blindheim
- 3 Buskerud
- 4 Døsen
- 5 Enebø
- 6 Gjeite
- 7 Haaland
- 8 Hallem
- 9 Halsnøy
- 10 Hedmark
- 11 Helgeland

- 12 Jæren
- 13 Karmøy
- 14 Krosshaug
- 15 Kvalsund
- 16 Kvasseheim
- 17 Meberg
- 18 Oslo
- 19 Rønseberg
- 20 Salte
- 21 Seglheim
- 22 Snartemo

- 23 Sætrang
- 24 Tegle
- 25 Telemark
- 26 Trygsland
- 27 Ugulen
- 28 Veiem
- 29 Veien
- 30 Vemestad
- 31 Vestrum
- 32 Vigra
- 33 Øvre Berge

Norway

Sunniva Halvorsen

Introduction

Prehistoric textiles in Norway have been preserved in three ways: in their organic state, as textile impressions on metal or pottery, or in a mineralised state with organic structures replaced by metallic salts. Most of the Norwegian prehistoric textiles are preserved in their original organic state. From the total of 346 textile fragments registered by Lise Bender Jørgensen (1986), nine textiles are impressions left on metal, and nine are mineralised.

Apart from a small group of peat bog textile finds, the surviving textiles come primarily from graves. The variations in burial traditions affected the preservation of textiles. The graves discovered often reflect the use of textiles in the higher strata of society, rather than the entire population. Rich burials are both easier to discover as they might be marked with mounds or raised stones, and are also more likely to contain metal objects which help in textile preservation. Graves also hold another source of knowledge on prehistoric clothing: belts, pins, and clasps found *in situ* can reveal how textiles were worn as clothing.

Textiles are usually not found at settlements, although there are some from the Late Iron

Age (Mortensen 1998). The unique bog finds of Tegle and Helgeland have been preserved as a result of the Early Iron Age Scandinavian custom of depositing objects in peat bogs (*cf.* Mannering *et al.*, Franzén *et al.* this volume).

Not included in this overview are textile implements, although these are very important in understanding the full context of textiles and textile production.

Chronological and Cultural Background

The Scandinavian Bronze Age covers the period from *c.* 1800 to 500 BC. The transition between the Early and Late Bronze Age occurred *c.* 1100 BC (Kock Johansen 2000, 14–16). The Iron Age in Norway covers the period from the introduction of iron around 500 BC to the coming of Christianity in AD 1030. This chapter deals with the Early Iron Age, from *c.* 500 BC to approximately AD 570. The Early Iron Age is divided into three periods (Solberg 2003, 38, 72, 128, 183, 218): the Pre-Roman Iron Age (500–1 BC), the Roman Iron Age (AD 1–400), and the Migration period (AD 400–570).

Sources of information about the Bronze

Age and Early Iron Age in Norway are primarily archaeological, until the appearance of a few runic inscriptions around AD 200. Graves and settlements have yielded the bulk of the source material, but deposits, hill forts and iron-making installations are also important contexts for our understanding of life in Norway during the Bronze and Iron Ages (Solberg 2003, 37, 73–78, 129–136).

The earliest textile fragments in Norway date to the Early Bronze Age, when the sheep was introduced to the area as a domestic animal (Bender Jørgensen 1986, 232; Hårdh 1993, 79; Kock Johansen 2000, 60). Bronze Age society seems to have been more organised and stratified than in the semi-agricultural Neolithic period. Settlements became more permanent and subsisted on agriculture and animal husbandry, although hunting and fishing remained important (Kock Joansen 2000, 130–142). The elite probably controlled the best agricultural areas as well as the bronze trade. Chieftains in these areas had close contact with southern Scandinavia, acquiring bronze in exchange for goods such as antlers and furs (Kock Johansen 2000, 78–83; Harding 2001, 325–329). Several monumental burial mounds, containing stone sarcophagi from the Early Bronze Age have been discovered. In most of Norway, these Bronze Age mounds are in the form of cairns, and these heaps of stones with no outer protection left few preserved artefacts. South-western Norway had very close connections to Jutland in Denmark, where the mounds were built with soil on top, which provided a better environment for the preservation of textiles (Kock Johansen 2000, 86–105). The very few Norwegian Bronze Age textiles come from Rogaland in the south-west of Norway, and date to the Early Bronze Age. The transition between the Early to the Late Bronze Age included the change from inhumation burials to cremations (Harding 2001, 318–321). The Late Bronze Age tradition of cremation was not conducive to the preservation of textiles (Kock Johansen 2000, 122–130).

With the transition to the Pre-Roman Iron Age (500–1 BC), bronze exchange networks collapsed and iron gradually became easily available and eventually replaced bronze (Kock Johansen 2000, 241–252; Solberg 2003, 33–65). The power base of the elite disintegrated, and society seems to have become less

stratified. The Pre-Roman Iron Age was a period of growth, as settlements expanded and agricultural production intensified. Crops now probably included flax in the western part of Norway (Ringstad 1993). Although there are only a few finds of imported goods which can provide information about the long-distance contacts, religious customs, such as depositions and burials, demonstrate that Norway was part of a larger cultural tradition that included southern Scandinavia and northern Germany (*cf.* Mannering *et al.*, Möller Wiering in this volume). In the Pre-Roman Iron Age, the dead were mainly cremated and buried with only a few grave goods (Solberg 2003, 40–42). The burial customs thus account for the fact that Norway has no known textiles preserved from this period.

Norway was primarily a rural and agrarian area throughout the Early Iron Age. Most settlements were farmsteads of varying sizes. Its population increased throughout the Early Iron Age, reaching a maximum in the Migration period, when even areas with poor soil and difficult terrain were settled and adapted for agriculture (Myhre 1983). This population growth was an important factor in the development of a more stratified and well-organised society. Subsistence was based on cereal crops and livestock, but fishing and hunting continued to be important as well, particularly in areas less suitable for agriculture. Crafts were based on household production, although a development towards more specialised production appears to have occurred during the Roman Iron Age and the Migration period. Pottery, fine metalwork and advanced textile production seem to have been the work of specialised craftspeople (Solberg 2003, 158–159; Thingnæs 2007, 102–104). Furthermore, activities such as hunting, fishing and iron smelting were probably connected to seasonal production sites in coastal and mountainous areas. The Early Iron Age saw a continuous rise in the utilisation of these non-agrarian areas. The use of mountainous areas for seasonal settlements connected to animal husbandry increased as well. The forests and mountainsides were seasonally used for grazing, hunting and iron production. The exchange goods from Norway, such as fur, hide, antler, bones, and iron, came from these non-agrarian production sites, although the trade was probably controlled and organised by the elites.

During the Roman Iron Age (AD 1–570), Roman influence reached areas far outside its empire, including Norway (Solberg 2003, 66–123). Contacts with areas south of Norway increased both the quantity of imported goods, as well as the need to provide export goods for exchange. Consequently, contact with Roman culture had a major impact on both cultural and material traditions in Norway during the Roman Iron Age (Cunliffe 2001, 440–446). Drinking equipment, weapons, glass and fine textiles were imported. The Roman weight system was adopted, and the runic alphabet developed by AD 200. The high degree of contact and exchange with northern Europe continued during the following Migration period (Todd 2001, 472–477).

On the coast of south-western Norway, centres of power were established on Jæren and Karmøy in the Early Bronze Age, and these were still important during the Early Iron Age (Solberg 2003, 118–121). Several new centres of power and wealth developed during the Roman Iron Age. Power and status were based on the control of the best agricultural areas, military power, and exchange goods. The new chiefdoms were strategically situated so as to control the communication lines, such as major rivers and the coastline. During the Roman period, a stronger aristocracy appears to have developed through the adaptation of some Roman customs, *e.g.*, military organisation (Solberg 2003, 92–93). Some circular settlements have been interpreted as barracks for the chieftain's men. Greater riches, wider social differences and increased population pressure may have resulted in a higher degree of conflict in society. This might be one explanation for the building of several hill forts during the Roman Iron Age and the Migration period. They have been interpreted as an expression of the organised defence of several small tribal chiefdoms.

Burials from the Roman Iron Age comprise both inhumations and cremations, and a variety of burial sites and grave markers occur (Solberg 2003, 76–78). Cremation, accompanied by a few grave gifts, was the most prevalent rite. The number of inhumations increased during the Roman Iron Age, starting in eastern Norway. These inhumation graves included dressed bodies, with gifts of food and drink, weapons or textile equipment such as spindles, weaving swords, shears, needles and needle-cases. The

inhumation tradition continued and became more prevalent during the Migration period.

The Early Iron Age was a period of great expansion. At the end of the Migration period (Solberg 2003, 124–177), even the most marginal agrarian areas were settled, crafts were more specialised, and trade with Continental Europe flourished. The Early Iron Age ended abruptly *c.* AD 570. Many farmsteads were abandoned, the number of rich graves decreased drastically, the population declined and significant social changes appear to have occurred. Burial finds are vastly diminished, and the question of whether this is due to a change in burial customs or if it reflects a true crisis and radical transformation of society has been debated. The plague is seen as the most probable cause of the population decline which ends the Early Iron Age in Norway so abruptly (Solberg 2003, 177).

Research History

The first scholar to write about prehistoric textiles in Norway was Johan Hiorth in 1907. Hans Dedekam was, however, the first to address the material in more depth by analysing the finds from Snartemo II and Enebø/Eide and using them to discuss the costume and textile production of the Migration period (Dedekam 1926). Dedekam also published the bog find from Tegle (1924). When new spectacular burials were discovered at Snartemo, Bjørn Hougen analysed the textiles along with the other grave goods and collected all known Migration period textile finds (Hougen 1935). In 1933, Hougen also published the bog find from Helgeland.

During the late 1940s, Charlotte Blindheim published several finds from the Early Iron Age, in particular a Late Roman Iron Age find from Rønseberg (Blindheim 1946). She discussed different weaving methods, including the use of weaving swords, as well as Iron Age costume based on the position of jewellery, fibulae, belts and clasps in graves, in particular Migration period clasps (Blindheim 1947a; 1947b). Marta Hoffmann made an important contribution to research on Iron Age loom technology in 1964, with her thesis *The warp-weighted loom – studies in the history and technology of an ancient implement*, which was partly based on her analysis of the Tegle find (Hoffmann and Trætteberg 1959). It still remains the seminal work on the subject.

During the late 1970s and 1980s, there was a renewed interest in prehistoric textiles, making them more visible as archaeological source material. Bente Magnus published the textiles from the Krosshaug find (1975), as well as the textiles from the Halsnøy boat (1980). Bente Magnus and Inger Raknes Pedersen investigated the finds from Enebø/Eide (Magnus 1982a; 1982b; Raknes Pedersen 1982a; 1982b) and Blindheim (Magnus 1988; Raknes Pedersen 1988). Lise Bender Jørgensen's work (1986; 1992) on a very large amount of the textiles from prehistoric Scandinavia and Northern Europe includes catalogues of most Norwegian prehistoric textiles found in burials. Three types of textiles identified by Bender-Jørgensen of relevance to the present survey are the Verring, Huldremose and Haraldskjær types. The Verring group (Bender Jørgensen 1986, 140–145) comprises standardised z/s-twisted diamond twills with a high thread count identified throughout the northern fringes of the Roman Empire from the Early Roman Iron Age onwards. The Huldremose type (Bender-Jørgensen 1986, 133, 345) includes s/s-twisted twills with thread counts ranging from 12/11 to 20/20 threads/cm. The Haraldskjær type refers to plain z/z-twisted 2/2 twills common throughout Scandinavia (Bender Jørgensen 1986, 64–69, 161–164). Furthermore, her work created a platform for discussing issues such as loom technology and textile trade routes (Wild and Bender Jørgensen 1988). Penelope Walton's investigation of fibres and dyes in Norwegian textiles (1988) provides important information for the discussion of import and trade of textiles.

During the 1990s, several important works on tablet-weaving appeared. Egon Hansen (1990) published a handbook, which used archaeological material as examples, e.g. Norwegian Early Iron Age tablet weaves from Snartemo and Enebø/Eide. Another important study is the work of Lise Ræder Knudsen (1996). She analysed and reconstructed various techniques of tablet weaving in 20 different tablet-woven bands, five of which were from the Norwegian Early Iron Age: Blindheim, the narrow two-threaded band from Snartemo II, the pattern-woven animal frieze and the horsehair patterned band from Enebø/Eide, and the pattern-woven, so-called baldric from Snartemo V.

Migration period finds from Norway have

been published by Margareta Nockert (1991), who discussed the finds from Døsen, Veiem, Enebø/Eide, Ugulen, Snartemo and Øvre Berge, and included a catalogue of 34 graves with textiles found in connection with clasps.

Siv Kristoffersen (2000) touched upon the relationship between Migration period jewellery and fashion, and the social significance of textile implements in graves, in her PhD thesis on ornaments and social contexts (2000). This subject was further investigated in *Kvinne drakten fra folkevandringstid – draktutstyr* (2006), which presents the brooches, pins, clasps and other jewellery found in graves in Rogaland.

Synnøve Thingnæs (2007) and the present author (Halvorsen 2008) investigated the Migration period textiles from Norway in their Master's theses. Thingnæs re-analysed and catalogued the textiles from Snartemo, Øvre Berge and Vemestad in southern Norway and focused on the question of a specialised textile handicraft during the period. The present author's work concerned textiles found in the Tegle and Helgeland bogs.

Most of the archaeological textile finds are from the 1800s and early 1900s, when it was far more common to excavate graves. Today, Norwegian archaeology focuses mainly on rescue excavations. Only a few graves have been excavated after 1980, compared to the large number of graves opened up in the early years of Norwegian archaeology. Therefore, only few finds of prehistoric textiles have been added after Lise Bender Jørgensen published her catalogue in 1986. The Bergen Museum's acquisition of four Early Iron Age textile finds: three from Hordaland and one from Sogn og Fjordane, derive from Migration period graves, but have not been analysed as yet. The Museum of Cultural History in Oslo possesses five grave finds with textiles dated to either the Early Iron Age or the Migration period. One is from Akershus, one from Vestfold and one from Vest-Agder. The remaining two are from Hedmark, which previously had not been registered as containing any Early Iron Age textiles. Only the textiles from Finstad, Akershus have been partly analysed. No textiles have been registered at the Archaeological Museum of Stavanger after 1982, but a re-examination of the collection led to the discovery of fragments belonging to an earlier find from Vindafjord, Rogaland.

Fibres

Most preserved textiles in Norway are made of sheep wool. In a combined investigation of Danish and Norwegian wool types (Walton 1988), several Norwegian Roman Iron Age and Migration period textiles were analysed. Most samples proved to belong to a class of hairy medium, and the related generalized medium fleece type. It is largely the same quality as we find in the modern Spelsau or Icelandic sheep, and it seems to be of local origin (Walton 1988, 149). Walton has demonstrated that a greater range of fleeces was available in Norway than in Denmark during this period, the medium fleece type probably being native to Norway. It is slightly coarser than the hairy medium/generalised medium variations. The fleeces grouped as fine were probably imported from the northern parts of the Roman Empire (Walton 1988, 152). Unspun and dyed horsehair has been used to decorate several Migration period tablet-woven bands.

There is reason to believe that flax and possibly nettle and hemp were used for textile production in Early Iron Age Norway. Flax seeds have been found in Early Iron Age settlement layers (Schjølberg 1994, 263; Solberg 2003, 56,152). Although bast fibres are seldom preserved, one Migration period fragment of a linen tabby comes from Meberg, on Lista in western Norway (Bender Jørgensen 1986, 250). Bundles of nettle stems were found with the boat from Kvalsund (Jessen 1929).

Dyes

Some Norwegian textiles have been tested for dyes (Walton 1988; Vanden Berghe *et al.* 2009). Indigotin is the most common dye in Norwegian samples and is probably derived from woad. Traces of yellow have also been found, both alone and combined with indigotin or red dye. Indigotin has been detected in the Roman Iron Age textiles from Sætrang (Ringerike) and Hallem (Nord-Trøndelag). At Sætrang, woad was mixed with an unidentified yellow. At Hallem, there was evidence of both yellow and red dyestuff, but their source could not be identified. Indigotin has been detected alone in Øvre Berge, Snartemo V, Evebø/Eide and Helgeland. In Veiem, as in Sætrang, it was combined with an unknown yellow dye. The blue had also been mixed with another colour in a tablet weave in Snartemo

V. A fine twill and a fringe in the Tegle find contained indigotin and alizarin, a red probably derived from madder. Madder was also found in the rich graves of Veiem, Snartemo V, and Evebø/Eide. In Evebø/Eide it was used in combination with an unidentified yellow dye. Imported insect dye, probably Polish cochineal, was detected in Veien and Evebø/Eide. Both red dyes would have been imported.

Bronze Age

Only two Norwegian Bronze Age graves yielded textiles, both rich burial mounds at Jæren and Karmøy in Rogaland, in south-western Norway (Hougen 1935, 59; Bender Jørgensen 1986, 243). These textiles are very similar to the contemporary Danish finds (*cf.* Mannerling *et al.* this volume). They are tabbies with a low thread count, 4–6 threads/cm, and z/s twist (Bender Jørgensen 1986, 15–25). The material is too limited to draw general conclusions about textile production in Norway during the Bronze Age.

Roman Iron Age

The preserved Roman Iron Age textiles come from east-central Norway, and the western through north-western and middle parts of Norway. The east-central finds belong primarily to graves in Vestfold and Buskerud, while most of the western finds come from Kvasheim in Rogaland. Trøndelag, Møre and Romsdal yielded some of the most spectacular textile finds from this period in Norway.

A grave mound at Sætrang, dated to AD 310/320–375, contained the burials of a man and a woman. Finds from this burial included assorted imported goods, such as gold rings, glass and weaponry, as well as textiles (Hougen 1935, 65–66; Blindheim 1947b, 9–10; Bender Jørgensen 1986, 243; Walton 1988, 150; Ræder Knudsen 1996 21). Among them is the only patterned, tablet-woven band from the Roman Iron Age found in Norway, attached to a fabric of the Verring type (Bender Jørgensen 1992, 126–128, 133–136). There were also two fabrics of z/z-twisted 2/2 twill, one red and one checked in blue, red and yellowish colours.

Another important find comes from Blindheim, on Vigra, Møre and Romsdal, a mound that covers five graves dated to the Late Roman Iron Age. Three of the graves, of

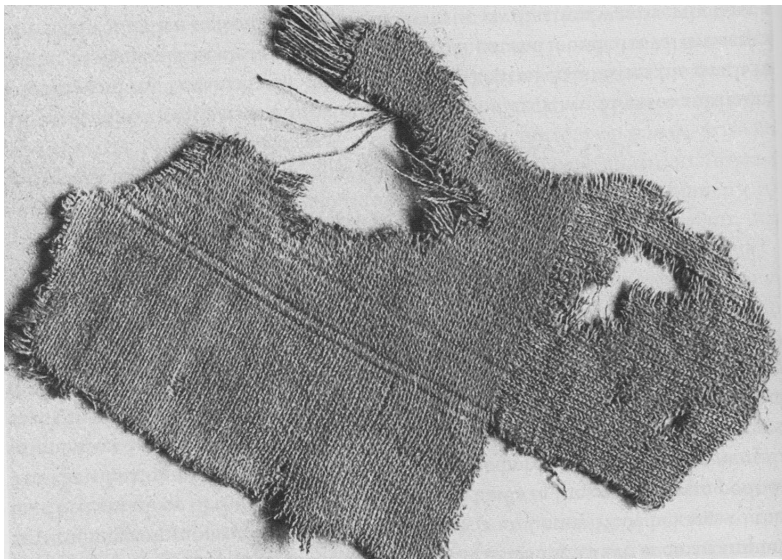
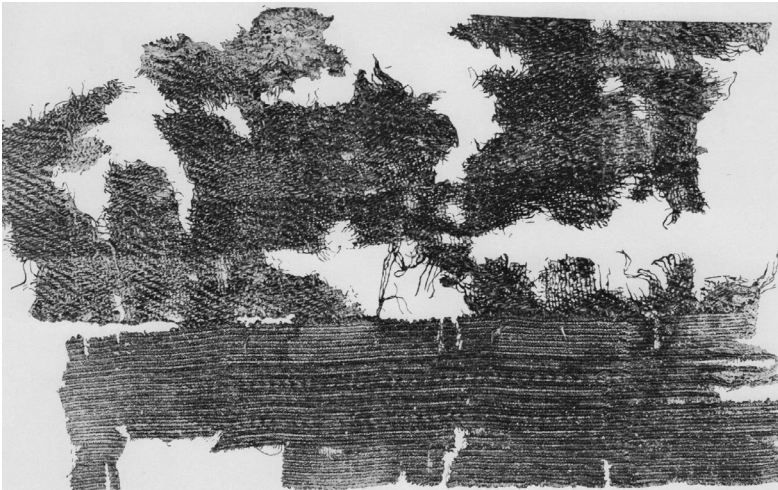


Fig. 13.1. Checkered twill with tablet-woven border from Blindheim, Møre og Romsdal, c. AD 250 (After Hougen 1935, Pl. XII).

Fig. 13.2. Corner of a mantle from Gjeite, Nord-Trøndelag, c. AD 200 (After Bender Jørgensen 2003b, 101).

a man, a woman and a child, contained textiles (Hougen 1935, 64; Bender Jørgensen 1986, 245; Raknes Pedersen 1988; Magnus 1988; Ræder Knudsen 1996, 63–65). The child's grave contained the only piece of tabby from the Roman Iron Age in Norway. It is a rep, made in S2z/z-twisted yarn. Three fabrics were identified from the female grave, all high quality textiles with checked patterns made by using colour and spin variations, as well as diamond twill binding. Two textiles seem to have had a napped surface. A broad, striped, tablet-woven band is attached to the fabric with light and dark checks (Fig. 13.1). Raknes Pedersen (1988, 119) concluded that the band had been sewn onto the textile, not woven into it, as Bjørn Hougen proposed in 1935. The fine quality of the textiles lead Magnus (1988) to suggest that they might

have been imported from the provinces of the Roman Empire.

A very rich grave at Gjeite, in Levanger, Nord-Trøndelag is dated to the beginning of the Late Roman Iron Age and contained several different textile fragments of high quality, including one of the Verring type (Hougen 1935, 62–63; Blindheim 1947b, 8; Bender Jørgensen 1986, 246). It may have contained a mantle of the same kind as found in the bogs in northern Germany (*cf.* Möller-Wierring in this volume), but only one corner of it has been preserved (Fig. 13.2). It consists of two, broad, tablet-woven bands, ending in tassels where they meet. The technique is simple warp-twisting, and the bands are striped in red, yellow and blue. At least 120 paired tablets have been used to weave the bands, counting 20 tablets/cm.

A Late Roman Iron Age warrior grave at Rønseberg, Selbu, Sør-Trøndelag (Blindheim 1946; 1947b, 11) contained a reddish-brown twill with a thread count of 15/13 threads/cm. It is a 2/2 twill variation, where the weft binds in tabby at equal intervals, creating a striped look. The other fabric found in the grave is a Verring type diamond twill, in two colours, now red and black. The red thread is z-twisted, the black is s-twisted. It has 12 threads/cm. Blindheim (1946, 180–181), who discovered crossing threads in this fabric, along with some irregularly long floating threads, suggested that the crossing threads were wefts and indicators of several weavers working together (Blindheim 1946; Bender Jørgensen 1986, 246; *cf.* Mannering *et al.* in this volume).

Hallem, at Stiklestad, Nord-Trøndelag, was a rich burial from the later part of the Late Roman Iron Age. It contained several textiles of high quality with colour variation. There is one Verring type textile, a red diamond twill, and a checked 2/2 twill with light ground weave and red checks. Another fabric is striped in red, yellow and different shades of brown (Bender Jørgensen 1986, 246). Dye analyses of the Hallem textiles indicated indigotin and unidentified yellow and red (Walton 1988, 148, 150).

Another Late Roman burial find comes from Håland, Hå. It demonstrates another way of decorating textiles: here, a narrow band woven in broken/diamond twill is decorated with triangular bronze sheets (Bender Jørgensen 1986, 244).

The cemetery of Kvasheim, on Jæren, Rogaland, consisted of more than 250 graves, dated from AD 300 and well into the Migration period. Significantly more female than male graves have been identified, and the jewellery in these graves indicates connections to northern Jutland. Kvasheim has been interpreted as a centre of exchange with the southern regions, and the textiles found here share many traits with contemporary Danish material (*cf.* Mannering *et al.* in this volume). Twenty-nine graves contained textiles, of which eight graves date to the Roman period, nine are from the transition period between the Late Roman and Migration period, and twelve date to the Migration period. In the Roman period, there is a considerable amount of spin-patterned fabrics at Kvasheim, six of which are dogtooth-patterned. These textiles could be imports from the Roman areas. There are seven z/z-twisted 2/2 twills and four diamond twills. The transitional period from the Late Roman to the Migration period is characterised by a mixture of z/s and z/s-twisted 2/2 twills, and diamond twills, some of which are of high quality. With the exception of one spin-patterned textile, the Migration period textiles are all z/z-twisted 2/2 twills. Horsehair-patterned tablet weave occurs in one grave (Blindheim 1947b, 41–42; Bender Jørgensen 1986; 54–58, 160, 244–252; Lillehammer 1996).

A few textiles were found in a Late Roman Iron Age boat discovered in a bog at Halsnøy, in the southern parts of Hordaland. Rags of textiles had been soaked in tar and reused as caulking to waterproof the lapstrakes. There are two different fabrics, both of rather fine quality. One is a 2/2 diamond twill, with a thread count of 13/18 threads/cm. The other is a spin-patterned 2/2 twill, with 15/16 thread/cm (Magnus 1980; Bender Jørgensen 1986, 160).

Migration Period

Most of the Migration period textile finds come from southern and western Norway. Only a few Migration period graves with textiles have been found in south-eastern Norway: one in Østfold, one in Buskerud, nine in Vestfold and two in Telemark (Bender Jørgensen 1986, 64, 247–249).

The largest cemetery in eastern Norway

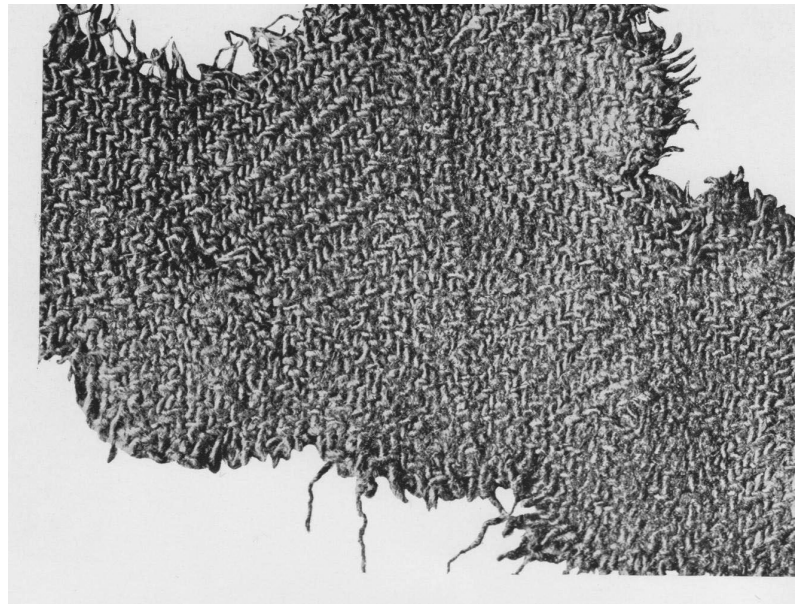


Fig. 13.3. Diamond twill from Veien, Buskerud (After Hougen 1935, Pl. XII).

is located in Veien, Ringerike, Buskerud. It is situated in an agriculturally rich inland region, which appears to have been a centre of power from the Early Roman Iron Age onwards. Its wealth and influence were probably due to the control of the trade routes and the production of trade commodities in the mountainous inland regions (Solberg 2003, 106). The Veien grave where textiles were found was wealthy both in textiles and other grave goods. The grave contained a narrow, tablet-woven band with individually turned tablets, which was attached to a red, z/z-twisted diamond twill, with a full surface. There were also a red z/z-twisted 2/2 twill and a red z/s-twisted diamond twill, as well as several different fragments of coarser 2/2 and diamond twills (Fig. 13.3). One special fabric was probably a mixture of wool and plant fibre; the presence of the latter was deduced from the fact that every fourth thread is missing (Hougen 1935, 67; Bender Jørgensen 1986, 247; Walton 1988, 148). Red dyestuff from imported Polish cochineal was detected in one of the Veien textiles (Walton 1988, 148).

A grave at Vestrum, Hedrum, Vestfold, contained a band 5.2 cm wide, woven in z/s-twisted broken 2/2 twill, with a thread count of 36/17 threads/cm, and considered to be imported from outside Scandinavia (Hougen 1935, 67; Bender Jørgensen 1986, 164, 248). In addition, there was a red fabric in broken 2/2 twill, z/z-twisted with 16/16 threads/cm.

In Agder, in southern Norway, 21 Migration

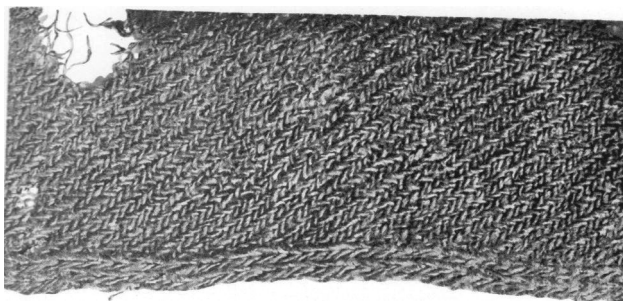


Fig. 13.4. Twill with tablet-woven border from Snartemo V, Vest-Agder, c. AD 500 (After Hougen 1935, Pl. XIII).

period graves contained textiles (Bender Jørgensen 1986, 64, 248–251). Several of these are of a high quality, with thread counts of 18–20 threads/cm. The coastal areas of Vest-Agder seem to have been a wealthy area during the Migration period. It was a transit area for exchange southwards and towards the coast, with vast inland resources. In her discussion of the Migration period warrior costume, Lise Bender Jørgensen (2003a, 77) mentions nine graves that contained textiles with similar traits. Five of these graves are from Agder: Snartemo II, Snartemo V, Øvre Berge, Vemestad and the lost Trygslund find. These graves have exceptionally rich grave goods, including weaponry, textiles and other objects. Common for all these graves is the presence of a blue/green and/or a red tunic, trimmed with horsehair-patterned tablet-woven bands.

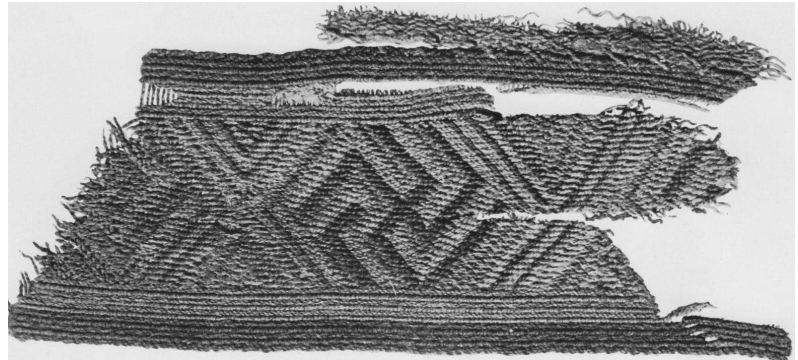
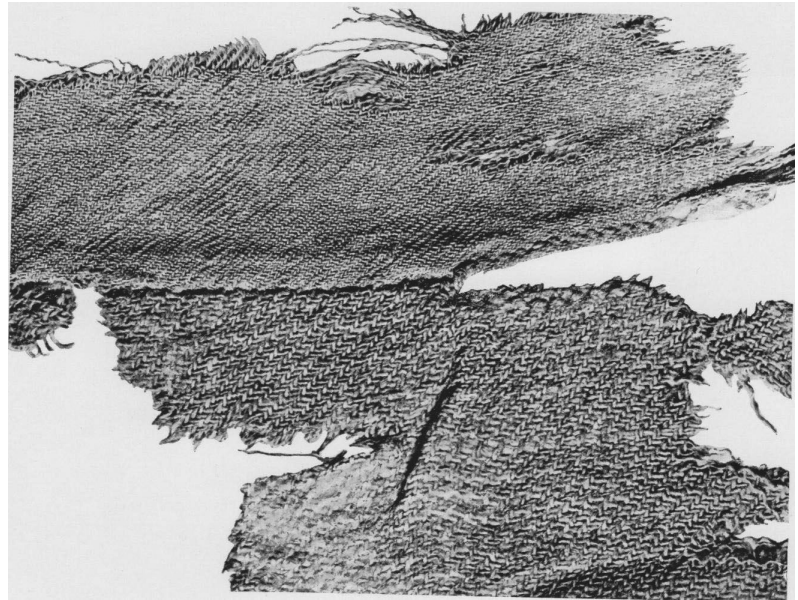
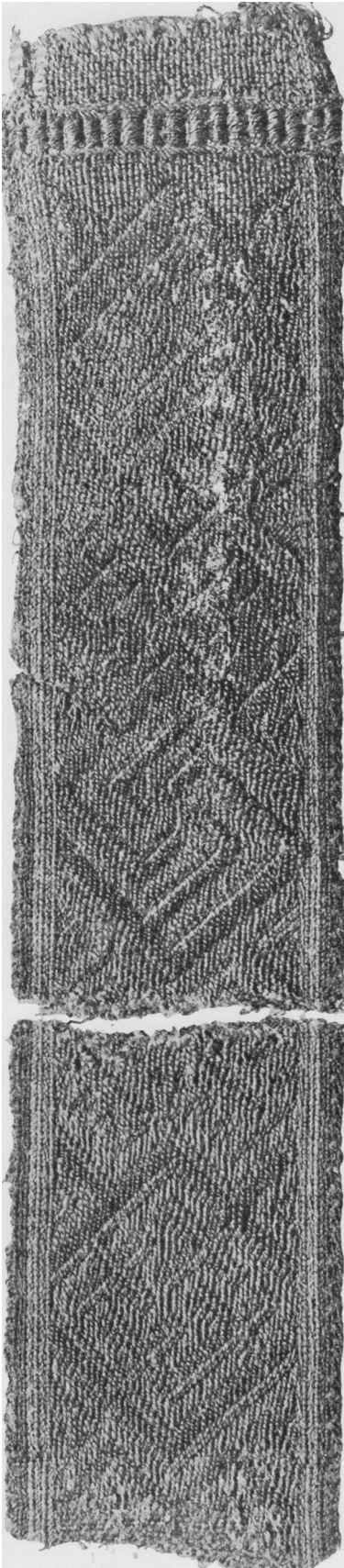
The site of Snartemo is particularly well known for its Norwegian Migration period textiles. The Snartemo burials are very rich, containing import goods, gold objects, assorted and lavishly decorated weaponry and fine textiles (Dedekam 1926; Hougen 1935; Bender Jørgensen 2003a; Thingnæs 2007).

Snartemo grave II contained three different tablet weaves. Four pairs of clasps with reddish tablet-woven bands have probably been attached to what might once have been a blue/green tunic. The clasps might also have belonged to two other garments, one red and one blue/green. The tablet-woven bands to which the clasps were attached were patterned with both horsehair and wool. One narrow band is woven in two shades of red in simple warp-twining. The last band is patterned with tablets turned individually, forming a pattern of an animal figure, in red, blue and yellow. The woven fabrics are all twills and it is difficult to establish the number of types there might have been due to the poor excavation and conservation. The twills are now reddish,

blue/green and yellowish, and some fabrics have once been striped or checked (Dedekam 1926; Hougen 1935; Blindheim 1947b, 11–14; Bender Jørgensen 1986, 250; Walton 1988, 148–150; Nockert 1991, 59–63; Ræder Knudsen 1996, 71; Thingnæs 2007).

The context and stratigraphy of the Snartemo grave V textiles are not clear: it may have been a single grave, but it might also have contained a secondary burial. The number of different fabrics the grave contained is not fully established, but Synnove Thingnæs (2007) has recently provided an overview of how the fragments might be grouped. All fabrics are 2/2 twills and most of them share the typical Migration period traits of z/z-twist and a thread counts of 12–14 threads/cm. Two blankets lay on top of the body; one was made of a bi-coloured, spin-patterned fabric, with a thread count of 8–9 thread/cm, and the other of a blue/brown z/z-twisted fabric with a thread count of 7–9 threads/cm. Two other fabrics might be from a mantle or some kind of upper-body garment. These are S2z/z-twisted, with thread counts of 11–13 threads/cm. One of them is striped in two colours, the other is red. Thingnæs (2007) believes the madder-red fabric with a horsehair-patterned tablet-woven band in red and blue to be a mantle (Fig. 13.4). A fabric interpreted as part of the trousers is now of a light brown colour, while the tunic seems to have been woad-dyed blue/green. Additionally, there is at least one fabric of unknown use; it is of green/blue, brown and reddish colours. One tablet-woven band, often interpreted as a baldric (Fig. 13.5), is geometrically patterned in blue, yellow, red and green by individually turned tablets (Dedekam 1926; Hougen 1935; Blindheim 1947b, 11–14; Bender Jørgensen 1986, 250; Walton 1988, 148–150; Nockert 1991, 59–63; Ræder Knudsen 1996, 84; Thingnæs 2007).

A burial at Øvre Berge, Lyngdal, Vest-Agder, contained three types of 2/2 twills. A z/s-twisted fabric, woven of light and dark wool, with a thread count of 8–10 threads/cm, has been interpreted as a blanket. Another z/z-twisted fabric, with a thread count of 13–14 threads/cm, which was probably a tunic, was dyed blue/green. Gores of a denser fabric had been inserted into this fabric (Fig. 13.6). These are made of a striped reddish, z/z-twisted fabric, with 25 threads/cm. Attached to the piece of blue twill was a tablet-woven band (Fig.



13.7), geometrically patterned with individually turned tablets in red, yellow and blue (Hougen 1935, 77–78; Blindheim 1947b, 15–18; Bender Jørgensen 1986, 251; Walton 1988, 148–150; Nockert 1991, 63–64; Thingnæs 2007).

Three graves containing textiles were found in Øvre Vemestad, Lyngdal, Vest-Agder. The best preserved was a male grave (Inv. C8983-98), containing 3–4 types of z/z-twisted twills. One is a red diamond twill, the others are 2/2 twills. One is chequered in shades of red, while another fabric was originally green. No tablet weaves were found in this grave, but an adjacent grave, B4414, contained a reddish horsehair-patterned band attached to blue or green twill (Hougen 1935, 76–78; Bender Jørgensen 1986, 251; Thingnæs 2007, 76).

In the Rogaland region in south-western Norway, 24 Migration period graves with textiles have been found, 12 of which are from the cemetery in Kvasheim, where Roman

Fig. 13.5. Tablet-woven band from Snartemo V, Vest-Agder, c. AD 500 (After Hougen 1935, Pl. XIV).

Fig. 13.6. Two twill fabrics sewn together, Øvre Berge, Vest-Agder (After Hougen 1935, Pl. XVIII).

Fig. 13.7. Tablet-woven band from Øvre Berge, Vest-Agder (After Hougen 1935, Pl. XVIII).



Fig. 13.8. The warp from the Tegle find (©Arkeologisk Museum i Stavanger).

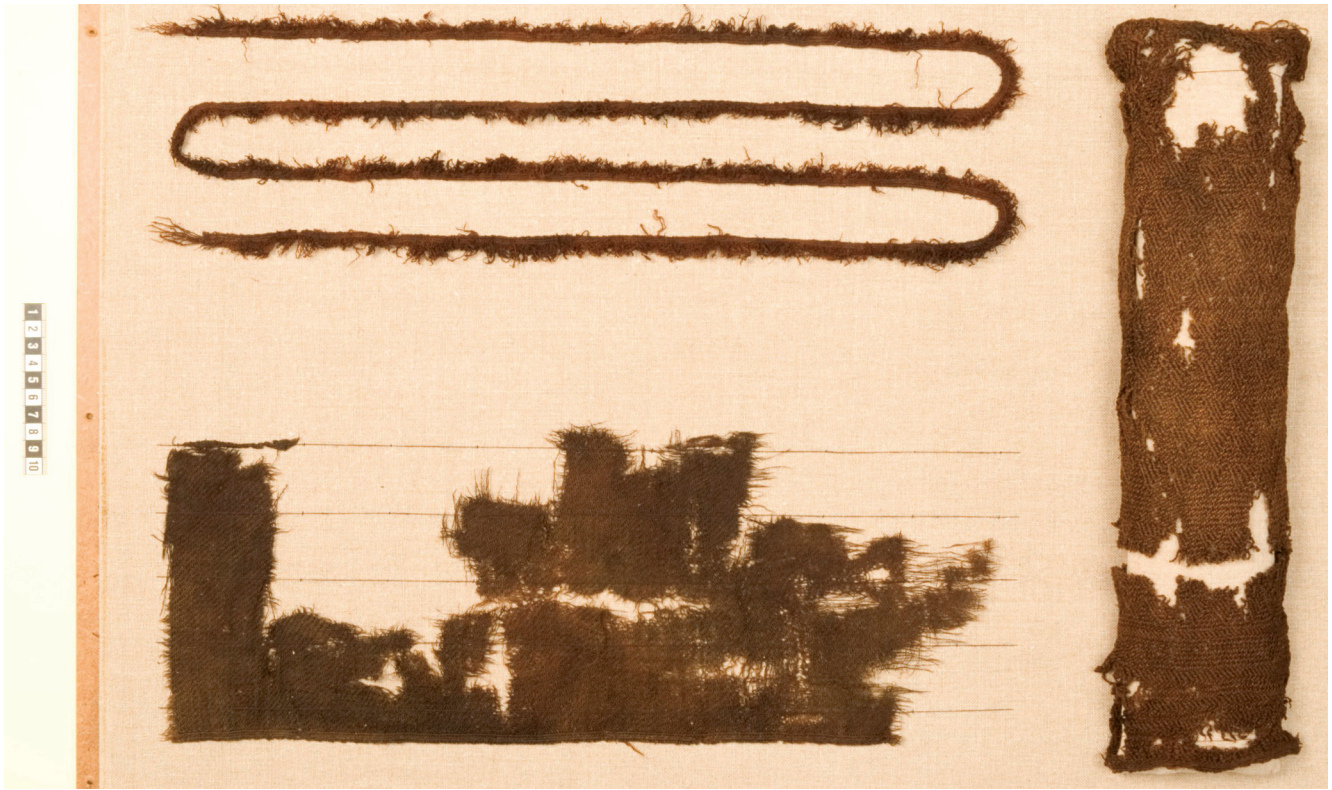
period textiles have also been found (Bender Jørgensen 1986, 252–253).

One unusual find from Rogaland is Midt-Salte, where raw wool and s-twisted yarn were included along with the grave goods (Bender Jørgensen 1986, 252; Walton 1988, 148–150). Rogaland has also yielded two important bog finds. Bog textiles are far less common in Norway than in Denmark and northern Germany (*cf.* Mannering *et al.*, Möller-Wiering, Möller-Wiering and Subbert in this volume), however textiles have been discovered in three Norwegian bogs, although none of them are connected to bog bodies.

The find from Tegle, Jæren, Rogaland has been of great importance for the discussion of loom technology in the Early Iron Age (Dedekam 1924; von Walterstorff 1928; Hougen 1933; Hougen 1935, 82; Hoffmann and Trætteberg 1959; 1964; Halvorsen 2008; 2009; 2010). The find contained an entire warp for a warp-weighted loom (Fig. 13.8). The warp was made by tablet weaving, where the tablet weft had been pulled out in loops to form the

warp for the ground weave. The wool warp was found in a bag sewn of a coarsely woven fabric. The bag also contained several different types of wool yarn, unspun wool, twisted hair, a sprang tube, a tablet-woven fringe and several textile fragments (Fig. 13.9). The sprang tube was started and finished with tablet weave. It provides the earliest evidence of sprang in Norway. A fragment of fine 2/2 twill had a tablet-woven border. It had been dyed with indigotin and alizarin, possibly deriving from woad and madder (Vanden Berge *et al.* 2009). A tablet-woven fringe, made by pulling out the weft in small loops on one side, was also of a fine quality. It had been dyed with woad and madder in the warp, and madder in the weft (Vanden Berge *et al.* 2009).

In contrast to the Tegle find, at Helgeland, Sandeid, Rogaland, textiles were dispersed in the bog over an area of at least 20 m² (Hougen 1933; 1935, 83; Halvorsen 2008; 2009; 2010). At least seven different fabric types have been found, all z/z-twisted 2/2 twills, with 8–16 threads/cm. At least one of these fabrics was



died with woad (Vanden Berge *et al.* 2009; Halvorsen 2009). Some of the textiles have seams, and were probably fragments of clothing, although little can be deduced about their shape and size. The find also includes probably the best preserved tablet-woven band from Early Iron Age Scandinavia (Fig. 13.10). It is a broad band made of wool, 10.5 cm wide, with approximately 80 tablets and woven with a complex geometrical pattern. The ground weave now looks reddish and the pattern is light brown. Traces of yellow dye

have been found (Vanden Berge *et al.* 2009; Halvorsen 2009). Many fragments of the band are preserved, indicating that the band was at least 250 cm long (Halvorsen 2010). In addition to textiles, a bundle of human hair as well as some unspun wool and two glass beads were found in the bog.

Fifteen Migration period graves in Hordaland yielded preserved textiles (Bender Jørgensen 1986, 253–254). Some of the best known Migration period textiles come from three graves in Døsen, Os, Hordaland. They are well

Fig. 13.9. The Tegle find contents: top left – fringe; bottom left – twill fragment; right – sprang tube (©Arkeologisk Museum i Stavanger).

Fig. 13.10. A fragment (Af) from the broad tablet weave from the Helgeland find (©Arkeologisk Museum i Stavanger).

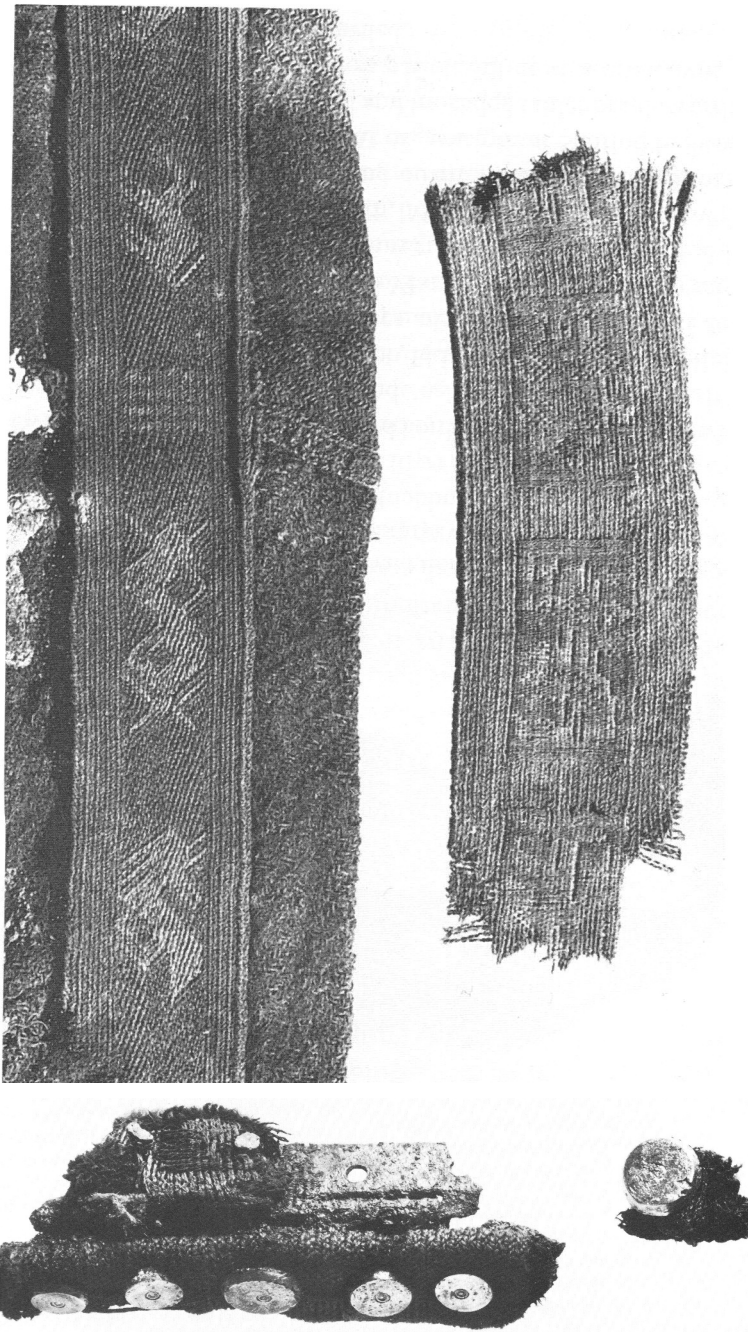


Fig. 13.11. Tablet-woven bands from Evebø/ Eide, Sogn og Fjordane, c. AD 450–500 (After Bender Jørgensen 2003c, 133).

Fig. 13.12. Wrist clasps with tablet-woven band from Veiem, Nord-Trøndelag (After Bender Jørgensen 1986, 66).

preserved and the stratigraphy of the textile layers is known. In the best preserved male grave B6091, three textiles were identified as blankets which had been wrapped around the body. They were coarse and full. Two sleeves, 40 and 46 cm long, were preserved up to the gores under the arms. One preserved sleeve has three gores, while the other has just one. The opening is 7 cm wide and is finished with a cuff made of folded textile (Nockert 1991, 46). These sleeves are important for the

discussion of Migration period costume. The grave also contained tablet-woven bands with geometrical patterns.

In the female grave B6090, there is a fragment of rep and several z/z-twisted 2/2 twills. Additionally, there are wrist clasps attached to tablet weaves patterned with individual turns. The Døsen finds demonstrate that both women and men wore garments with long, fitted sleeves. However, Margareta Nockert (1991, 110) has shown that there are more clasps in male graves, which might indicate a gender differentiated costume tradition (Hougen 1935, 79–80; Blindheim 1947b, 19; Bender Jørgensen 1986, 254; Walton 1988, 148–150; Nockert 1991, 46–47).

Sogn og Fjordane has 10 Migration period graves with preserved textiles, while Møre and Romsdal has only four (Bender Jørgensen 1986, 255). Two of the graves from Sogn and Fjordane belong to the nine very rich, warrior graves mentioned earlier (Bender Jørgensen 2003a, 67–68).

Ugulen, Luster, Sogn og Fjordane (Blindheim 1947b, 84; Bender Jørgensen 1986, 255; Nockert 1991, 58–59) have two graves with horsehair-patterned tablet-woven bands. A warrior grave B6092 contained four broad clasps. The best preserved band is presently 7.2 cm wide and made with 80 tablets. The band is patterned with yellow and green wool, and has been attached to a green garment in z/z-twisted 2/2 twill, with 12x12 thread/cm.

A rich chieftain's grave at Evebø/ Eide, Gloppen, Sogn og Fjordane, is one of the best known Migration period finds (Dedekam 1926; Hougen 1935, 80–82; Blindheim 1947b, 19–21; Magnus 1982a; 1982b; Raknes Pedersen 1982a; 1982b; Bender Jørgensen 1986, 255, 162–163; Walton 1988, 148–150; Nockert 1991, 50–58; Ræder Knudsen 1996, 82, 100; Thingnæs 2007, 80–83). In addition to fine import goods, the find contained several dyed textiles, as well as some tablet weaves. The textiles were well preserved, and as the grave was excavated professionally, the spatial context and stratigraphy of the textiles is well documented. The man was probably dressed in two tunics, trousers and a cloak, of which a corner is preserved. The textiles are all 2/2 twills with thread counts ranging from 14–16 to 18–20 threads/cm and some are full. Several of the textiles are checked and both fabrics and bands are dyed with red, blue, green and yellow.

The cloak is red with yellow and green checks and has a fulled surface. It is decorated with a 2.7 cm wide tablet-woven border and has fringes. This band has a zoomorphic pattern, made by turning the tablets individually (Fig. 13.11). Of the two tunics, the innermost had 20–24 threads/cm, and was fulled and dyed with Polish cochineal. This tunic also had wrist clasps and might have been trimmed with two different tablet-woven horsehair-patterned bands, located on the cuffs and on the lower edge of the garment. The outer tunic was dyed with woad and decorated with tablet-woven bands with a zoomorphic frieze. A red fabric with blue/green checks has been interpreted as the trousers.

There are five Migration period graves with textiles found in Trøndelag. From the areas further north (in Nordland), only three graves were found with Migration period textiles (Bender Jørgensen 1986, 256–257).

Veiem, Grong, Nord-Trøndelag, discovered in 1976, is regarded as one of the most elaborate warrior graves from the Migration period (Farbrege 1979; Bender Jørgensen 1986, 256; Nockert 1991, 47–50). The costume recovered had four clasps, two smaller and two larger, although their original position is unknown (Fig. 13.12). The clasps had been attached onto horsehair-patterned tablet-woven bands, the best preserved of which is 7.7 cm wide, and is made with 84–87 tablets (Nockert 1991, 49). The bands, dyed yellow, blue and madder-red, were attached to a 2/2 twill, z/z-spun fabric with 14/16 threads/cm. This fabric was dyed green with woad and a yellow dye, while the seams were made in red and white yarn. One tablet-woven band has been interpreted as a possible baldric. This is a pattern-woven band, striped in yellow, red and blue/green. Bronze foil was folded around the band to reinforce a seam, and it might have been lined with leather. One broad clasp is attached to a red, horsehair-patterned tablet-woven band, and a polychrome z/z-twisted 2/2 twill fabric. A coarse 2/2 twill has been interpreted as a blanket, and there are several 2/2 twills with thread counts of 8–13 threads/cm (Bender Jørgensen 1986, 256; Nockert 1991, 47–50).

Conclusions

Most of the textiles in the Norwegian corpus are fabrics woven on a loom, although tablet

weaving and sprang techniques are also attested. A unique exception is a piece of felt from Seglheim dated to the transition between the Roman Iron Age and the Migration period. Unspun wool was found in a grave from Øvre Salte, from the Migration period, and in the bog finds from Tegle and Helgeland.

The material is too limited to draw any conclusions concerning textile production in Norway during the Bronze and Pre-Roman Iron Ages. However, a sufficient amount of archaeological textiles from the Roman and Migration periods survives to provide an overview of textile technology during this time in Norway.

Roman period textiles are distinguished by a variety of weaves and combinations of twist direction (Bender Jørgensen 1986, 51–58). Only six textiles have been registered from the Early Roman Iron Age, each from different graves. Five of these have features in common with the material from Denmark (*cf.* Mannering *et al.* this volume), belonging to the so-called Huldremose type (Bender Jørgensen 1986, 133, 345). The last of these Early Roman textiles is a z/s-twisted diamond twill with 22/19 threads/cm of the so-called Virring type (Bender Jørgensen 1986, 140, 346). It is found in Denmark from the second phase of the Early Roman period and is known in rich graves throughout the Late Roman Iron Age in Scandinavia (Bender Jørgensen 1986, 29–58, 346–348). The Virring group of textiles has been identified throughout the northern fringes of the Roman Empire from the Early Roman Iron Age onwards, and has been found in Poland, northern Germany, Holland and Britain (Bender Jørgensen 1986, 140–145; *cf.* Möller Wiering and Subbert, Maik, Wild in this volume).

The Virring type shows a remarkably uniform quality, which is interpreted as an indication of professional production. It is often found in combination with Roman imports, and it disappears at the end of the Roman Iron Age. Lise Bender Jørgensen (1986, 141–146; Bender Jørgensen and Wild 1988) has interpreted it as a textile type imported from the northern provinces, of possibly Gallo-Roman origin. The Virring type is found in 19 Norwegian graves from the Late Roman Iron Age, all of which are rich burials; among these are the famous graves from Gjeite and Sætrang (Bender Jørgensen 1986, 51–58, 140–146).

There are 71 preserved textiles from the Late Roman Iron Age in Norway, deriving from 32 graves (Bender Jørgensen 1986, 51–58). Of these, 61.5 % are 2/2 twills and 37 % are broken/diamond twills. There is only one tabby (1.5 %). Thread counts vary between 9 and 40 threads/cm, although commonest are thread counts of 12–16 threads/cm. The broken/diamond twills come from 17 different graves, mostly classified as belonging to the Verring group. The 2/2 twills of the Late Roman Iron Age are z/z-twisted (7 graves), z/s-twisted (10 graves) or spin-patterned (12 graves). This corresponds well with textiles from the rest of Scandinavia (Bender Jørgensen 1986, 59–64). The z/z-twisted twills are especially common at Kvasshheim (Bender Jørgensen 1986, 51–58).

Spin-patterned twill textiles are characteristic of the Late Roman Iron Age, although their use continues into the Migration period (Bender Jørgensen 1986, 55–58, 68, 155–161). They occur in 12 graves dated to this period, three of which are dated to the transition between the Roman and Migration periods, and five to the Migration period. The sites are mainly located in the western part of Norway. Twelve of these textiles are woven in a dogtooth pattern. Nearly all dogtooth patterns in Norway are from the final phase of the Roman Iron Age, or the Early Migration period (Bender Jørgensen 1986, 55–58, 68, 155–161).

Due to the prevailing burial custom of inhumation in a stone cist inside a mound, the Migration period has yielded a relatively large quantity of well-preserved textile finds from all over Norway (Bender Jørgensen 1986, 64–69). A total of 267 different textiles from 97 graves have been recorded, of which 211 are loom-woven fabrics and 56 are tablet weaves. The Migration period is distinguished by exceptionally fine tablet-woven bands and many plain 2/2 twills, z/z-twisted with 12–16 threads/cm. Migration period costume was distinguished by metal clasps attached at the openings of the garments, especially at the wrists. These were attached to cuffs, which in many finds are trimmed by tablet-woven bands. The metal clasps have often preserved the tablet weaves in a mineralised state, providing us with an insight into a remarkable textile tradition of high quality tablet weaving (Bender Jørgensen 1986, 64–69, 161–164; Nockert 1991, 46–64).

Of the fabrics, 1.9 % are tabbies, 91.5 % are 2/2 twills, and 6.2 % are broken/diamond

twills. Of the tabbies, one piece is plain tabby, the rest are reps. Twist direction clearly differs from the Roman Iron Age textiles: only one piece is s/s-twisted, 4.3 % are z/s-twisted and 2.4 % are spin-patterned. The Migration period textiles are generally z/z-twisted (90.5 %). Thread counts vary between 5 and 36 threads/cm, with 8–16 threads/cm being the most common. There are a few textiles which combine plied and single thread, a trait Bender Jørgensen (1986, 65) has identified as a possible special characteristic of cloaks. One of the few tabbies is made of linen. The plain z/z-twisted 2/2 twills of the Haraldskjær type are also common in the rest of Scandinavia (Bender Jørgensen 1986, 64–69, 161–164).

The Roman period and especially the Migration period are distinguished by tablet-woven bands adorning the clothing. From the Roman Iron Age onwards, tablet weaving was used either for simple starting borders using only a few tablets, or for sophisticated variations of decorative bands. The Roman Iron Age textiles provide six examples of tablet weaves, while there are 56 from the Migration period. The large number of tablet-woven bands from the Migration period is probably connected to the contemporary costume tradition of using metal clasps attached to cuffs and at the openings of the garment. The tablet-woven borders from the Roman Iron Age are all made in a simple, warp-twisting technique, except for one that is patterned with individually turned tablets. Three graves in Norway dated to the transition to the Migration period contained tablet-woven borders, one of these patterned with horsehair (Bender Jørgensen 1986, 64–65).

While the tablet weaves of the Roman Iron Age were mostly simple warp-twined bands, the tablet weaves from the Migration period are often patterned. Three different patterning techniques have been distinguished so far. Of the 56 tablet weaves from graves, 21 are patterned with horsehair and weft-wrapped in a tapestry-like technique. Seventeen bands are patterned by the individual turning of the tablets. One band, from the bog find of Helgeland, is warp-twined and brocaded with a pattern thread in wool (Bender Jørgensen 1986, 64–65; Nockert 1991, 140–149).

Textiles, including their production techniques and usage, relate closely to human life. Our understanding of prehistoric textiles in Norway hence forms an important part of

our overall knowledge of life in prehistoric Norway. Most of the textiles seem to be locally produced, but research has also demonstrated how textiles and dyes can be used to trace exchange networks and cultural contacts between Norway and the rest of Scandinavia, and further into Continental Europe. Textiles also provide an important insight into social hierarchies and craft organisation during the Early Iron Age. This survey of prehistoric textiles in Norway has attempted to show that, although preservation conditions and burial traditions have left vast gaps in our knowledge of textiles for some time periods and social groups, there are large and important collections of textiles that can help us understand different aspects of textiles in prehistoric Norway. Research into various aspects of prehistoric textiles has intensified over the years, but many questions remain unanswered. It is hoped that new methods and questions will provide a deeper insight into prehistoric textiles in Norway.

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