

Knitted Hats of the 15th & 16th Centuries



A 'Knitting Madonna' circa 1390

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Introduction/Summary of the Project

This project presents two knitted hats, as would have been worn throughout western Europe during the 15th and 16th centuries. The items presented are a tall acorn cap, suitable for a French (Burgundian)/Italian/or English gentleman of middle/lesser nobility and a ‘Monmouth cap’ suitable for a lower working class female during the reign of Queen Elizabeth I.

Both hats are knitted using yarn that was carded, plied and spun by hand, and using period knitting techniques (i.e. knitted in the round on 5, double-pointed needles, using stockinette stitch – further details given in the following section). Although these are not my first knitting projects, they are my first attempts at adult hats or period headwear.

Knitting in Period

In the early 20th century various items (socks, pouches, pillows) dating to the Roman period (4th/5th centuries CE) were found in Egypt and identified as being knitted items (Rutt, 1987). This assumption was later contradicted by Burnham (1972), who re-analysed them and found that they were in fact made through a method alternately referred to as single needle knitting or nalbinding. As a result, there are relatively few knitted items dating to pre-1600 in museum collections.

Although unable to specifically date the origin of knitting, we have strong evidence that it existed as early as the 14th century, due to the existence of paintings (miniatures in particular) which depict Mary knitting, collectively called the ‘knitting madonnas’ (one such drawing is shown on the cover of this documentation).

Tools

The ‘knitting madonnas’ are shown using 3 or 4, double-pointed needles. Although there are pictorial depictions and extant examples of knitting from the 14th century and later, there have been few pre-1600 examples of knitting tools found. It is conjectured that period

needles would have been made of bone, wood, or metal. The York Archaeological Trust for Excavation and Research describes the first pre-1600 knitting needles discovered in “The Archaeology of York: the Small Finds” (2002). This document describes two slender ‘rods’, tapering at the ends to 2.6mm and 1.9mm respectively. The rods are made of copper alloy, both measuring 180mm in length and dated to the late 14th century. In general, knitting (in the modern era) is done using needles of the same diameter, unless one needs to shape an item through changing the gauge of the material through the use of larger or smaller needles. The fact that the needles found were two different sizes has yet to be addressed by historians, although some suggest that in period, the use of two different sized needles, providing they were close in diameter, would have been acceptable. The initial item would have differing tension in places due to the varied needles, however after repeated washing and wear, the tension throughout the item would adjust.

Period Knitting Technique

Extant examples of period knitting show the exclusive use of ‘stockinette stitch’ (knit-wise stitches) prior to the 1600’s (Rutt, 1987; Carlson, n.d.), giving knitted items (the outside that is) the characteristic ‘v’ design, and somewhat ‘braided’ appearance. There is pictorial and extant evidence of purl-wise stitches in use from the late 1500’s in stockings (ICEDragon research website). All pictorial and extant examples of knitting and needles suggest that period knitting was done ‘in the round’ using 3 – 5 needles. This style of knitting produces a tubular shape ideal for garments, pouches, hats and stockings, which corresponds to the extant museum examples of pre-1600 knitting.

It should be noted that no period knitting ‘patterns’ have been found. However, based upon the generalisations used in period cooking recipes, it is suggested that period knitters either passed their patterns to one another verbally, following the oral/practice tradition of other craftspeople, or crafted items without a pattern, merely adding and subtracting stitches as needed to shape garments. It is this reason that I chose not to utilize the redactions

available from other historical re-enactors, instead creating my own pattern based upon the wool I have spun, needles I have on hand and the hat shape/sizes that I needed.

Materials

Extant examples of period knitting are predominantly made of wool and/or silk. Period examples of hats are felted, making it impossible to determine the initial thickness/ply of the yarn used, however other items, such as scoggers (i.e. knitted sleeve protectors) and stockings appear to have been made using 2 ply yarn, in a variety of thicknesses, including some very fine silk knitted at 20 or more stitches per inch (Flury-Lemburg, 1988).

Redaction 1: A Tall Acorn Hat for Middle/Lesser Nobility

Acorn Hats in Period

Numerous paintings during the 15th century depict men of various classes wearing what has come to be known as ‘acorn caps’: brimless, cloth or felted hats which could be either close fitting (figure 2, man on the right) or tall domes (figure 2, man on left), often with a little ‘stalk’ or stem sticking out of the top (figure 3). Munro (n.d) notes that the height of one’s acorn hat appears to correspond to the social class of the wearer, as well as the ‘current’ fashion. This being said, the basic style of the acorn hat stayed relatively unchanged throughout the mid-late 15th century, as seen in the work of Rogier van der Weyden (c. 1430), Petrus Christus (c. 1449), Dieric Bouts (c. 1460’s-1470’s), Moulins (c. 1490).

Some acorn hats appear to show seams at the topmost part of the hat, which contributes to the domed shape. If the hat is made of fabric or merely felted/blocked wool, then it is possible



Figure 2: ‘Ordeal by Fire’ by Dieric Bouts the Elder, circa 1461



Figure 3: Self Portrait, Dieric Bouts the Elder, circa 1462

that the pieces had graduated triangular tops, which were then stitched together. However, it is known by both extant examples of hats and household accounts that knitted hats were in use during this period, as seen in the following account:

1463 – Pour deux chapeaulx noirs faiz a l’aiguill [pour le roi]

trans. For two black knitted hats [for the king]

(Gay, cited in Munro, n.d.)

Another extant example is the Gunnister cap, a tall (-ish) acorn cap dated to the late 16th century. This cap is knitted at a reasonably tight gauge (8 stitches per inch) in stockinette stitch, with no visible seams (even at the crown) and with a turned hem (Henshall and Maxwell, 1951-52). It is this extant example that inspired my first hat redaction. My redaction is designed to be suitable in both height and colour (Figure 2) for a gentleman of lesser/middle/nobility or a merchant in good standing.

Materials Used

5 knitting needles – 4mm diameter	1 gallon of very hot water
approximately 100 g. black, merino wool	4 handtowels
scrap yarn to mark the start of the round	a sunny day

Method/Pattern

I began by carding the ends of the wool, which ‘fluffs’ them up, making them easier to spin. The yarn was spun using a modern replica of a Saxony spinning wheel (which was in use from the mid 1600’s on). In the modern replica (an Ashford ‘Traditional’), the wheel is situated closer to the flyer (the bobbin on which the spun wool is wound), and the angle is not as steep. After plying the wool, I washed it in warm water and hung it to dry, which serves to ‘set’ the twist. The resulting yarn is roughly equivalent to 2 – 4 ply, baby weight, worsted yarn.

1. Cast 120 stitches onto 4 needles, roughly 2 stitches per centimetre.

- this number was determined because the required diameter of the finished hat needed to be 52-56 centimetres, but needed to allow for shrinkage through the felting/fulling process. Wool items tend to shrink more in length than in width, thus I made the final hat double the desired length, but only slightly larger than needed in width.
2. Transfer the first stitch onto the needle holding the last stitch, begin by knitting these two stitches together. Place a stitch marker at this point.
 3. Knit regularly until the hat measures approximately 12-14 inches from the cast on row.
 4. Knit 5, k2tog; repeat to the end of the row.
 5. Knit the next 3 rows regularly.
 6. Knit 4, K2tog; repeat to the end of the row.
 7. Knit the next 2 rows regularly.
 8. Knit 3, K2tog; repeat to the end of the row.
 9. Knit the next 2 rows regularly.
 10. Knit 2, K2tog; repeat to the end of the row.
 11. Knit 1 row.
 12. K2tog; repeat for two rows.
 13. Continue this decrease until there are no more stitches. Break yarn and pull the tail inside the hat, weaving into the stitches to lock it.
 14. Felt the hat: soak the hat momentarily in VERY hot water. Wring it out and pound it against a hard surface (I used the inside of the laundry sink), periodically flattening the hat (without stretching it) and rubbing your hands up/down and side/side of both the inside and outside of the hat (opens and fluffs the wool fibers). Repeat this process until you can no longer see the individual knitting stitches and the hat resembles coarse felt.

15. Wring the hat as dry as you can (again, don't stretch it). Ball up one towel loosely and pack into the base of the hat, then roll the other three towels into cylinders, using them to prop the hat into a standing position.

16. Sit the hat in a warm sunny place to dry.

Results/Comments

To date, this was the most difficult pattern I've tried because I was creating it off the top of my head (a bad pun, I admit :). The hat took approximately 3 weekends to complete, although around the midway point I was getting concerned that it would be way too big. I had originally intended to leave the brim as a rolled brim (as stockinette stitch rolls in on itself naturally), but after further research realized that rolled brims on this style of hat are completely inappropriate. However, through the further research I discovered that this style of hat often had a doubled/hemmed brim. So prior to felting the hat, I used some of the leftover yarn and stitched the folded brim.



I've never felted anything before and was concerned that I wasn't 'doing it right', however I'm extremely pleased with the completed project – as is Lord Raphael, who now has a warm, yet period hat to wear at festival.

Redaction 2: A Monmouth Cap for a Lower Working-Class, English Woman

A Brief History of the Monmouth Cap

The Monmouth cap is named for the Welsh town of Monmouth, which lies on the Wye river. The geographic position of Monmouth, near a ready export medium and a



Figure 4: Monmouth Cap, on display in at the Nelson Museum & Local History Centre, circa 16th century.

thriving sheep industry nearby, aided in its positioning as a forerunner in the English knitting industry during the 15th and 16th centuries (Carlson, 2005).

Monmouth as a town flourished during the 15th and 16th centuries due to the demand for, and export of, the Monmouth cap. This demand was helped along by various statutes from Henry VII (*the Cappers Act of 1488*) and Queen Elizabeth I (*An Act for the Continuance of the Making of Caps, 1571*). The Cappers Act of 1488, forbade the wearing of foreign made caps, under the penalty of a fine, likewise, the 1571 statute by Elizabeth I decreed that:

...all [males] above the age of six years except some of certain state and condition, shall wear upon the Sabbath and Holydays, one cap of wool knit, thicked and dressed in England, upon the forfeiture of 3s 4d... .

Women also fell under this statute as they “...were constrained to wear white knit caps of woolen yarn, unless their husbands were of good value in the Queen’s book or could prove themselves gentlemen by descent...” (Isca Morrismen website).

The earliest mention of a ‘Monmouth cap’ as such, comes from a letter written by Lord Gilbert Talbot of Goodrich Castle, in 1576, where he gifts a ‘Monmouth Cappe’ to his father (Buckland, 1979). This suggests two things: that the hats were popular enough to have a ‘name’, and that they were fitting gifts for members of the noble classes. In addition, they have been immortalised on the stage in Shakespeare’s *Henry V*:

“Fluellen: Your majesty says very true: if your majestie is remembered of it, the Welshmen did good service in a garden where leeks did grow, wearing leeks in their Monmouth caps....”

(Act IV, Scene 7)

Although there are no period descriptions of the Monmouth hat, and only one known extant example¹, Buckland (1979) compiled the known information into the following description:

There is a brownish knitted cap in Monmouth's Local History collection which is believed to be a genuine specimen and the only survivor. It has been studied by experts who agree that there is nothing opposing a sixteenth-century date. It is seamless stocking stitch throughout, with a flat double brim knitted together at the edge, which continues into a loop, the crown is finished off with a small button, and it is knitted in coarse, thick, 2 ply wool, felted, thickend and shorn....It follows a carefully head-hugging, helmet-shaped pattern suggesting that this was important. It is in excellent condition but very small, eight inches deep, twenty-two inches (55cm) and only 59 stitches in circumference at the junction of the crown and brim, making roughly 2 ½ stitches to the inch after shrinking.

No one that I can find offers a suggestion as to why the loop is included in the hat. In thinking about it, I wondered if it was for tying it onto a shirt collar, or into a helm (if worn as an arming cap). When discussing it with Lord Raphael, he surprised me by suggesting that it was a feature to enable the wearer to attach it easily to his (her) belt, without damaging the felted cloth – a suggestion I found very sensible and quite probable!

Monmouth caps were in use by English lower classes and issued to lower ranking military personnel until well into the 17th century. No pictorial/painting representations have been found (although I am still looking), however, given the relatively innocuous nature of the hat, I suspect in period paintings it may appear to be just another 'cap', as we would not

¹ The other known example was buried with it's owner (at her request) in 1927 (Isca Morrisman, website).

be privy to the sort of detail needed to distinguish it from other caps. The existing records/references to Monmouth caps suggest that they were primarily brown in colour, with some being described as 'red', although white knit Monmouth caps would be reasonable due to Queen Elizabeth's 1571 decree.²

The redaction detailed below was patterned after the picture from the Nelson Museum and Local History Centre (Figure 4). Based upon that photo, the descriptions of similar, period knitted hats (like acorn hats) and the wool/yarn I had available, I developed my Monmouth cap redaction.

Materials Used

5 knitting needles – 5mm in diameter	1 gallon of very hot water
approximately 100 g. cream, merino wool	two handtowels & bowl
scrap yarn to mark the start of the round	a sunny day

Method/Pattern

I began by carding the ends of the wool, which 'fluffs' them up, making them easier to spin. The yarn was spun and plied using a bottom whorl, drop spindle. This was the first yarn I had ever spun, as such it varies in thickness from quite thin, to rather chunky and fuzzy. Top whorl drop spindles are seen only rarely at the end of the SCA period, however for a novice spinner, they are easier to learn.

After plying the wool, I washed it in warm water and hung it to dry, which serves to 'set' the twist. The resulting yarn is roughly equivalent to 8-14 ply, medium to chunky

² I have been unable to find any mention of a woman wearing such a cap, and am still looking for pictorial evidence of such. However, it seems quite probable that as coifs were a unisex form of headwear, a simple cap such as the Monmouth cap would also be used as unisex wear, particularly during cold weather. Additionally it is the sort of hat that might also be worn underneath other hats (such as straw hats) for added warmth.

weight, worsted yarn. The resulting hat had a gauge of 2 stitches per centimetre after felting/fulling.

1. Measure off 2 yards of yarn and make a slip knot. Cast on 60 stitches (20 per needle = 3 needles in use). Slip the last cast on stitch onto the first needle (next to the first stitch), with a row marker between them.
2. Knit the first row and Ktog³ the last cast on stitch and the first stitch of row 1. Tie a scrap of contrasting yarn *into* this stitch.
3. Knit regularly 8-9 rows (approximately 2 inches), weaving the tail from the back to the front of the work with each row, ending on a row where the tail is in the front.
4. Row 10: With the tail to the front, fold the cast on edge up, into the circle, matching it up to the row of stitches on the needles. Pick up the first stitch following the row marker *and* the stitch from Row 1 with the yarn tied into it. K2tog.
5. Repeat this procedure with each set of parallel stitches, to finish the seamed hem.
6. Row 11: knit around as usual.
7. Continue knitting regularly until the hat reaches approximately 40 rows, then knit 5, k2tog, repeat until the end of the row.
8. Knit 3 rows.
9. Knit 4, k2tog, repeat to the end of the row.
10. Knit 3 rows.
11. Knit 3, k2tog, repeat to the end of the row.
12. Knit 2 rows.
13. Knit 2, k2tog, repeat to the end of the row.
14. Knit 2 rows.
15. K2tog; repeat around continuously until you have approximately 8-12 stitches left.

³ Ktog: Knit together – common knitting abbreviation.

16. Slide all of the left over stitches onto one needle, then continue to K2tog until you have 1 stitch left.
17. Break the yarn and slip it through the loop left by the last stitch, pulling it snug.
18. Work the ending tail back through the hat to the inside and weave it into the hat to secure it.
19. Making the loop: finger braid the tail at the edge of the hem, until it is approximately 2-3 inches in length. Tie the braid off at the point which it joins the rest of the hat and weave the leftover tail into the hat to hide it and finish it off.
20. Felt the hat: soak the hat momentarily in VERY hot water. Wring it out and pound it against a hard surface (I used the inside of the laundry sink), periodically flattening the hat (without stretching it) and rubbing your hands up/down and side/side of both the inside and outside of the hat (opens and fluffs the wool fibers). Repeat this process until you can no longer see the individual knitting stitches and the hat resembles coarse felt.
21. Wring the hat as dry as you can (again, don't stretch it). Ball up both towel loosely and pack into the base of the hat, just to give it shape, not to stretch it taut.
22. Sit the hat (towel side down) on an upside-down bowl, and place the bowl in a warm sunny place to dry.

Results/Comments

This hat was more difficult to make than the acorn hat that makes up the first part of this project, due to the knitted double hem. Knitting the hem together rather than stitching it after the fact was more complicated than the stitching method employed with the acorn hat, but I feel it yielded a better result.

Another interesting note is that I ran across the Buckland (1979) article *after* making this hat, and was pleasantly surprised that the pattern I concocted based on photos and the results of other redactions is very close in dimension to the extant version described by

Buckland – 2 stitches per centimetre, felted, with a knitted, doubled hem, and a hem count of only 60 stitches.

Although I used the same felting method with both hats, this hat didn't take on the 'polar fleece' look of the acorn hat. I'm unsure as to why this is, although it may be that the cream yarn had a bit more lanolin left in it (it was washed before the spinning began) and that hampered the felting effect. I may try to further felt this hat in the future.

Additionally, it shrank more than I was prepared for. As a result, the doubled hem, which when unfelted came to the bottom of my ears when the hat was on, now comes to the middle/upper part of my ears – although Lord Raphael reckons it fits him perfectly now.

:)

I'm really happy with this hat and plan to make another one since my wool allergy prevents me from wearing this redaction. However, I think this redaction is a great project for those with wool allergies who want to create a period hat for warmth, because it would be possible to knit the 'inner' part of the brim from something other than wool (a silk/linen blend would be a period choice), so that the only part that actually touches skin (namely the forehead) would be a non-wool material. I also plan to make a brown or red version of this hat for Lord Raphael.

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