

AS HMS *DeBraak*, a sloop of the British Royal Navy, foundered off Cape Henlopen, Delaware, on 23 May 1798, her crew thought of little else but saving their lives. In a matter of minutes, more than half the ship's company perished, including the captain, Cdr. James Drew.¹ As she sank, *DeBraak* took with her a rich trove of material culture which lay untouched on the seafloor for the next two centuries. The anaerobic (oxygen-poor) environment of the wreck site preserved many organic artifacts (those made of plant and animal products) that deteriorate at other archaeological sites. Among these were fragments of the hats, clothes, and ribbons worn by *DeBraak*'s crew and pieces of the ship's sails. Although what survives is only a fractional sample, documentary sources and artifacts from other sites contextualize this assemblage. *DeBraak*'s materials provide a case study of textile use at sea and compliment the artifacts from other wrecks such as *Mary Rose* (English, 1545), *Vasa* (Swedish, 1628), *Kronan* (Swedish, 1676), *Invincible* (British, 1758), *Machault* (French, 1760), and *General Carleton* (British, 1785).²

In pursuit of a rumored treasure, a private salvage company located *DeBraak* in 1984 and began an unscientific recovery process which damaged or destroyed countless artifacts and resulted in the loss of untold information about the material world of the ship and the era. The divers who worked on the wreck in these years recalled opening wooden chests and finding masses of blue textiles which were generally not collected by the salvors.³ A rare ship's stove was unceremoniously dumped overboard from the salvage vessel and an exceptional knit cap, discussed below, was almost overlooked during the recovery.

Some scholars and archaeologists refuse to become mired in the ethical and cultural morass generated by archaeological sites excavated (or looted) in an unscientific manner. Often such sites are military or nautical in nature because these types of sites feature artifacts and associations attractive to enthusiastic relic hunters. Sometimes, the potential of an artifact assemblage outweighs the disappointment of what has already been lost. Since 1992, when the salvors' collection was turned over to the State of Delaware, the Delaware Division of Historic and Cultural Affairs has been the steward of *DeBraak*'s hull and some twenty thousand artifacts associated with the wreck. This material culture trove includes ceramics, glassware, armaments, accouterments, tools, personal effects, and textiles that continue to reveal new details about naval

culture at the end of the eighteenth century.

DeBraak began her life as a single-masted Dutch naval cutter and served in the Anglo-Dutch War and against French forces in the early 1790s. When war broke out between Great Britain and the French-allied Dutch Batavian Republic in 1795, *DeBraak* was in Falmouth, England, along with a convoy en route to America, and she was seized by the British Admiralty. Shipwrights and other workers refitted *DeBraak* and converted the ship into a two-masted brig-sloop, installing new fittings, delineating interior spaces, and mounting a new battery of guns on the ship's weather deck. By the time she departed England with a convoy bound for America in early 1798 under Commander Drew, *DeBraak* was crewed by eighty-four officers, seamen, and Marines, and carried fourteen 24-pounder carronades and two six-pounder iron cannon.⁴ After losing contact with the convoy in April, *DeBraak* captured a Spanish ship, the *Don Francisco Xavier*, and Drew transferred some of his crew onto their new prize. As the two ships came to anchor near Lewes, Delaware, on the afternoon of 23 May, *DeBraak* was caught in a sudden storm and quickly sank. What crew survived scrambled aboard the Spanish prize and subsequent efforts by the Royal Navy failed to salvage any more than a few pieces of the lost ship.⁵

The Royal Navy crews who attempted to salvage *DeBraak* in 1798 likely never imagined the ship would be raised nearly two centuries later or her contents would be the subject of intense study and careful conservation. One class of these artifacts is the ship's textiles, objects made from animal and plant fibers, which include both felts and woven fabrics. Future examinations of the buttons and buckles from the wreck, beyond the scope of this article, will reveal more details about how the ship's crew dressed. But from maintop to weather deck and from head to toe, *DeBraak* and her crew were covered in textiles. Among those that survive are felt hat fragments, a knit cap, garment fragments, stockings, shoe ribbons, and sailcloth.⁶

Most of *DeBraak*'s seamen wore common round (uncocked) felt hats. Felting, an ancient technique, results from the combination of pressure, friction, heat, and moisture on certain fibers.⁷ In the eighteenth century, the felting process involved five or more stages: bowing (vibration to evenly distribute fibers); basoning (applying pressure to achieve a conical shape or "bat"); planking or walking (pressing and rolling in steam); dyeing; and finishing (singeing, shaping, brushing, ironing, and curing).⁸ Hatters employed a variety of fibers in their work, including beaver, sheep's wool, and coney (rabbit).⁹

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The diversity of felts aboard *DeBraak*, with fragments representing over a dozen hats, echoed the range available to civilians.¹⁰ Coarse examples, fragments of the cheap hats of the ship's seamen, including one large brim fragment, were made entirely of wool fibers of varying sizes (FIG 1).¹¹ Other fragments feature a finer, tight felt, from hats which would have appeared smooth and slightly reflective. Such felt employed a mixture of fibers, and *DeBraak*'s examples include various combinations of sheep's wool, rabbit, hare, and beaver.¹² By 1798, common sailors had generally abandoned cocked hats in favor of round hats made from felt, painted canvas, or straw.¹³ Officers, on the other hand, continued to wear hats with cocked leaves (brim sections), often in the "bicorn" fashion, as evidenced by two such fragments from *DeBraak*. A nearly complete crown with a rounded (rather than angular, or "square") edge and a fragment of its cocked leaf also include silk fibers in the felt (FIGs 2-3). Previously undocumented in original hats of this period, silk fibers do not felt independently and thus must be incorporated into fur felts, perhaps to add a reflective sheen. A single felt recipe including wool, coney, and silk for "fine quality" hats appeared in an 1819 treatise.¹⁴ While the hat brims of much of *DeBraak*'s crew featured raw edges, several of the finer felt fragments show signs of decorative ribbon bindings on the brim edges. This practice was more common on better quality and military hats, and one brim from *DeBraak* retains a fragment of plain-woven silk ribbon, now a buff color (FIG 4).

In both fair and foul weather, some of *DeBraak*'s sailors chose other types of headwear besides felt hats, a rare example of which survived in the wreck. This brimmed knit cap is constructed from thick, single-ply, undyed wool yarn knit three stitches to the inch, and was slightly felted or brushed to make it thicker and warmer (FIG 5-6). The cap features a 5½ inch-tall crown and a double-layer 2¼ inch-wide brim. The knitter of this cap used decreasing stitches to shape the crown and attached the brim with a "double cast-on" method to secure the layers (FIG 7).¹⁵ The cap measures 22 inches in circumference on the inside base of the crown and originally featured a knit button at the center top of the crown to secure the yarn and

add decoration. Remarkably similar to one recovered in the 1970s from the New York City waterfront (now in a private collection), the *DeBraak* cap's simple construction and large yarn size suggest a professional knitter, perhaps working for a Royal Navy slops (ready-made sailor clothing) contractor, might have finished it in less than an hour.¹⁶

Just as common seamen chose hats to suit the weather, *DeBraak*'s commissioned and warrant officers, while at sea, wore simpler versions of the uniforms stipulated by official regulations.¹⁷ A fragment of one such officer's garment survives in the remains of the sleeve of a dark-colored jacket or coat (FIG 8). The two pieces of finely twill-woven wool are seamed up one side, with a seam allowance less than ¼ inch and stitching (probably linen, now vanished leaving only holes) at 8-10 stitches per inch. Such a coat might have borne gilded brass buttons and buttonholes worked in silk twist (a fragment of which survives from *DeBraak*), but little else, indeed sometimes nothing at all, marked officers apart from the crew while far out at sea.¹⁸ One other reminder of *DeBraak*'s officers is a small silk tassel that may have once adorned a sword or piece of furniture in the cabin.

Although caps and clothing were supplied by a massive slops contract system in England, the Royal Navy had no uniform regulations for common seamen in 1798.¹⁹ Some captains strove for uniformity among their crew and, on many ships, the common source of slops clothing resulted in some level of homogeneity. Many sailors wore some combination of their personal clothing and garments purchased from the purser's slops stores aboard ship and *DeBraak*'s sailors looked much like seamen across the Atlantic world (FIG 9). Most wore loose trousers, although some British seamen continued to wear petticoat breeches at the end of the eighteenth century.²⁰ Sailors favored checked shirts, although plain and striped examples were also common, and some wore plain or patterned waistcoats. All wore some type of short jacket, most often double-breasted and constructed of blue wool. A solid or patterned kerchief tied loosely around a sailor's neck finished the ensemble. Several fine silk fragments recovered from *DeBraak* (one with 80 warps and 96 wefts per inch and

Table A.

Weave	Warp spin	Warps per inch	Weft spin	Wefts per inch
Plain	S	24	S	20
Plain	S	20	S	16
Plain	S	20	Z	16
Plain	Z	24	Z	20
Plain	Z	20	Z	20
Plain	Z	28	S	20
Plain	Z	24	S	20
Plain	?	40	?	40
2/2 Twill	Z	56	Z	56
2/2 Twill	Z	40	Z	40

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FIG 1. Fragment of a coarse, all-wool felt hat brim with no evidence of binding. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 3. Mixed fiber felting, like the wool, beaver, hare, and silk fibers seen in this example at 200x magnification, appeared in several DeBraak hat fragments. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 2A & B. The crown (above) and cocked section (below) fragments of this felt hat suggest it was worn by one of DeBraak's officers. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 4. Felt hat fragment with silk ribbon binding partially intact. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.





FIG 5 A & B (left and above). The knit cap from DeBraak. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 6. Wool fiber from the DeBraak knit cap, 200x magnification. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 7. Fragment of the DeBraak knit cap brim demonstrating the two layer construction. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.

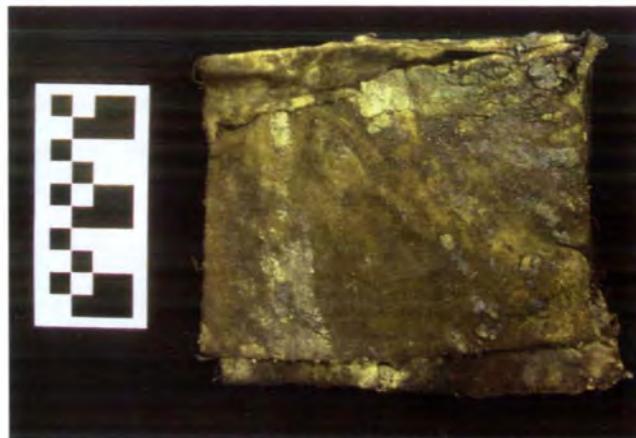


FIG 8. Twill-woven seamed fragment from DeBraak. Note seam allowance (less than 1/4-inch) on upper edges. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG. 9. DeBraak's sailors dressed much like this Royal Navy sailor drawn in 1799 by noted artist and satirist Thomas Rowlandson. © National Maritime Museum, Greenwich, London.



FIG 10. One example of the many varieties of coarse wool recovered from DeBraak. Note selvedge on lower side. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 11. Fragments of two textile types that once formed a small bag. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE



FIG 17. Example of a largely intact frame-knit stocking from DeBraak. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 12 (top left). Waistcoat fragment with a conical copper alloy button. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.

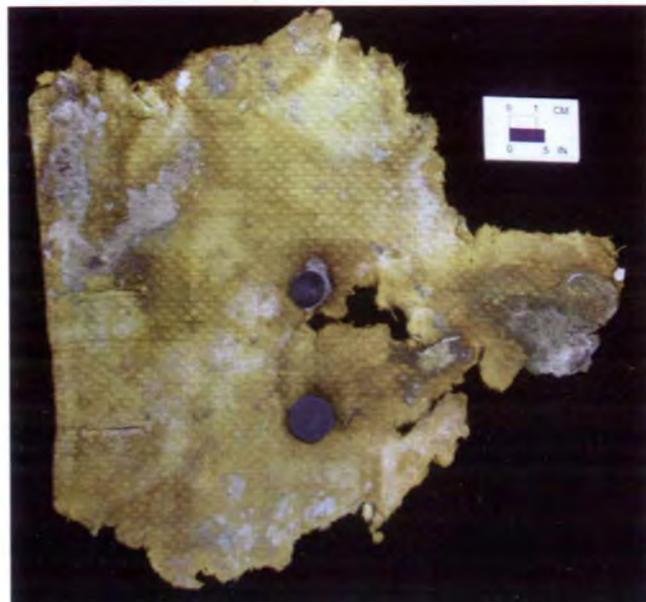


FIG 13 (left and bottom left). Front and reverse of upper left section of the waistcoat, showing buttonholes, two different button types, pieced lining, and lapel facing. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.

FIG 15 (top right). Detail of ribbon-trimmed pocket flap or welt on waistcoat fragment. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 16 (below). Charles H. Fithian wearing a reproduction of the DeBraak waistcoat. Photo by Blair Pershyn.





FIG 18 (top left). Fragments of a frame-knit stocking from DeBraak. Note the point on the insole of the foot section where the knitting changes from a two-knit, one-purl rib to a solid stockinette stitch. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 19 (top right). Most of DeBraak's shoes, like this example, featured ties of leather thongs or silk ribbon. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 20 (below). Striped and ribbed silk ribbon used as a shoe tie. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.

FIG 21 (right). Fragment of canvas puddening from one of DeBraak's anchor rings. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



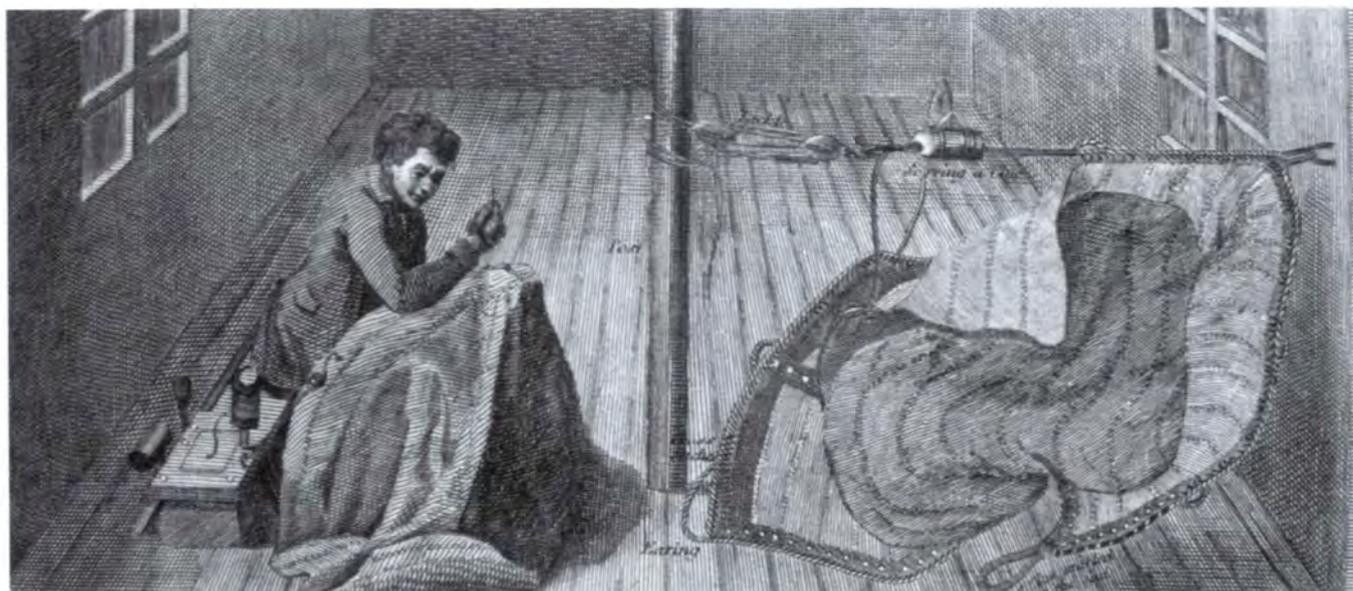


FIG 22. Sailmaker and loft as shown in David Steel's *The Art of Sail-making* (London: Printed for David Steel, 1796), frontispiece. Courtesy, the Winterthur Library: Printed Books and Periodicals Collection, Wilmington, DE.



FIG 23. Turned wood needle case (far left), leather sewing palm (left), and two wooden seam rubbers (right) recovered from DeBraak. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.

FIG 24 (top of opposite page). Evidence of sewing on De Braak canvas fragments. Clockwise from top left: probably hem with thread impressions; "tabled" hem without roping; probable rolled seam remnant; two fragments with flat seam stitch rows. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



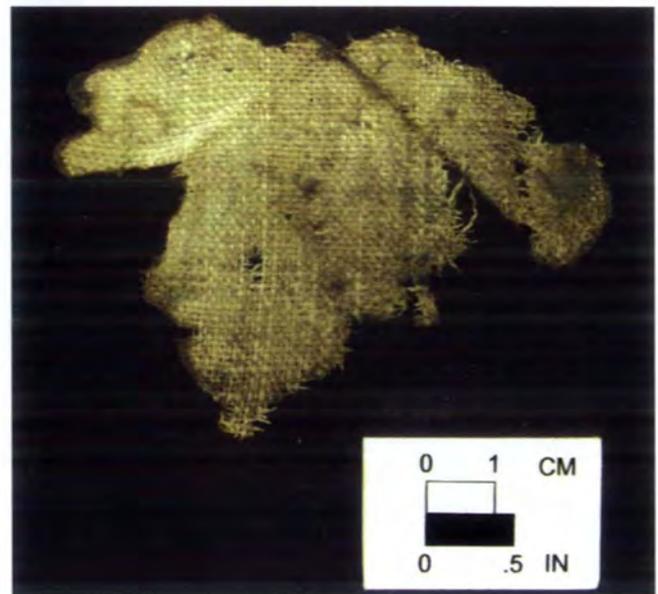
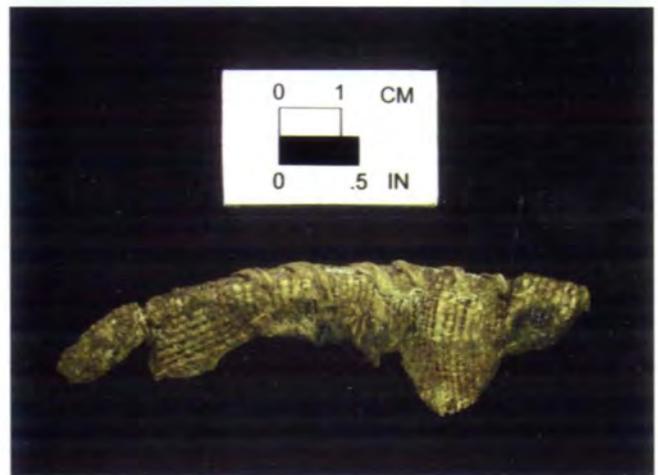


FIG 25. Two canvas fragments demonstrating the spectrum of sailcloth recovered from DeBraak. At left is a thick, heavy fragment with doubled warps and at right a lightweight, all-flax, plain-woven fragment. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 26. Fragment of canvas retaining its original selvedge. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.

FIG 27. Two of the fragments recovered in a tied packet of canvas patches, the remains of a sailmaker's supplies. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.



FIG 28. Partially unrolled fragment of tarred matting. Courtesy of the Delaware Division of Historical and Cultural Affairs/Delaware State Archaeological Collection, Dover, DE.

another with 128 warps and 120 wefts per inch) might be fragments of these ubiquitous kerchiefs.

Contrary to the homogenous appearance sometimes suggested by documentary records, *DeBraak's* textile artifacts confirm the ship's crew acquired their garments from a variety of sources. Woven wool fragments comprise one of the largest categories of *DeBraak* textiles and exhibit surprising diversity; among over forty wool fabric fragments, there are at least eleven distinct types (TABLE A). All of these fragments are slightly or heavily fulled (a process which felted surface fibers to thicken and tighten the cloth), but most are small pieces, none measuring more than 6 inches at their widest point (FIG 10). Although all are now oxidized to a dark brown color, these fragments likely originally varied as much in color as in weave and several exhibit selvages and evidence of construction, including probable seams. One set of fragments includes the remains of two different textiles, a heavily fulled plain-woven wool cut on the bias and a twill-woven straight-cut piece and are all that remains of a small bag or pocket stitched with silk thread (FIG 11).

The most identifiable garment fragments from *DeBraak* are those of a cotton and linen waistcoat (FIGs 12–16). This garment is constructed from a thin diaper cloth, a textile woven with a raised diamond pattern often used in the eighteenth century for "summer waistcoats" and other garments.²¹ The unmercerized cotton diaper cloth is the only occurrence of a cotton material in the *DeBraak* assemblage, suggesting the dominance of wool and linen in shipboard and sailor garment textiles at this date.²² A double-breasted garment, this waistcoat originally featured faced upper lapels designed to be turned back and two red ribbon-trimmed pocket flaps or welts. Its lining consists of a plain-woven white linen irregularly "cabbaged," or pieced, from several smaller sections, a common practice to conserve fabric.²³ The garment saw enough use to lose a few buttons; it originally bore unusual conical copper alloy buttons which were replaced in at least one instance by a larger flat copper alloy example.

The *DeBraak* assemblage includes approximately twenty-three fragments of knit wool and three partially complete wool stockings, all frame-knit (FIGs 17–18). Frame knitting became a cottage industry after the invention of the stocking frame by William Lee in 1600 and technical innovations like the Derby rib frame introduced by Jedediah Strutt in 1758.²⁴ Stockings were knit flat on these frames and then seamed up the back while hand-knitters knit "in the round," producing a seamless stocking.²⁵ Each of the complete stockings from *DeBraak* features a rear seam and is formed to accommodate the widening calf, rather than consisting only of a straight tube. They are ribbed with a two-knit, one-purl pattern up the leg and on the top of the foot, an effect allowed by Strutt's innovation which added some elasticity and decoration to the leg section. Like much of the *DeBraak* textile assemblage, minor variations suggest a variety of sources: knit sizes vary between 13 and 16 to the inch. Missing from the *DeBraak* assemblage are hand-knit stockings. However, these remained

an alternative at end of the eighteenth century, as demonstrated by the mix of hand- and frame-knit examples recovered from the *General Carleton* (1785), including a similarly ribbed frame-knit example.²⁶

Like the textiles from the wreck, *DeBraak's* shoes and boots represent a rare assemblage of datable artifacts (FIG 19). Many of the shoes were behind the fashionable standard for the 1790s, not unexpected for military- and naval-issue items.²⁷ Among these are many which fit a standard pattern: outdated in style, flesh-out, sturdy shoes. Sailors deliberately modified the latches of some of these shoes to accommodate ties rather than buckles. Interestingly, one such shoe was, according to Williamsburg master shoemaker D. A. Saguto, "of a much poorer quality of workmanship" than most others.²⁸ This shoe had minimal wear marks but featured a unique ribbon tie (FIG 20). The ribbon is 1¼ inches wide and includes three narrow stripes (two red stripes flanking a central white stripe) running down its center along with floating red ribs every ½ inch along the body. A common seaman might not have cared to purchase fine shoes, but he could afford a short length of fancy ribbon to adorn the footwear the Navy issued him.

Other shoes from the *DeBraak* more closely resembled fashionable standards of 1798 including several examples constructed of fine calf skin and designed to accommodate ribbon ties.²⁹ Among the ties of these shoes are a ½ inch black and a ½ inch off-white silk grosgrain ribbon. Another shoe featured two bow ties, each of a twill-woven, 1¼ inch-wide, off-white silk ribbon. The presence of shoes which retain their decorative bow ties in the *DeBraak* assemblage suggests at least some shoe ties were more for flash than function and the complexity of the bows indicates they were rarely untied. Such ribbons suggest *DeBraak's* sailors were making choices about fashionability and, at least in small ways, setting themselves apart as individuals within a naval hierarchy.³⁰

While many of the textile fragments recovered from the wreck were associated with garments, others represent the utilitarian fabrics of the ship. The crew of *DeBraak* used canvas for many purposes, including for sails, hammocks, awnings, buckets, coarse garments, and "puddening." Puddening reinforced a ship's anchor rings, which were, according to one contemporary manual "well parceled with tarred Canvas, and then wrapped round with twice-laid Stuff [rope]."³¹ *DeBraak's* anchor rings retain their original linen canvas puddening, without any remaining tarring or roping (FIG 21).

DeBraak's sails comprised the largest amount of textiles aboard the ship and her full compliment included thirty distinct types totaling over 3,408 yards of sailcloth, not including the extra sails carried on most ships.³² Sailmakers constructed sails as three-dimensional objects, with curves and shapes to suit the sails' purpose and carefully planned leeches, the sloping edges of sails, and gores, the angles on which canvas was cut, to shape each sail.³³ The process was time-consuming: the scarred fore topsail from HMS *Victory*, preserved after the battle of Trafalgar in 1806, took approximately 1,200 man hours to construct.³⁴ The sail loft of the 1790s was a spacious,

open room, well-lit by windows to facilitate both the design, using chalk points and lines marked onto the floor, and the construction of sails. In the winter, an iron heating stove might be lowered from the ceiling with a system of ropes. Scattered around the sail loft were long benches where sailmakers sat to work (FIG 22).

Canvas arrived in the sail loft in 38-yard (114 feet) bolts of 24-inch-wide material.³⁵ Where necessary, sailmakers avoided excessive damage to the weave of the cloth by cutting it with a knife rather than shears.³⁶ Using a triangular needle set against a leather palm with a metal eye like a flat thimble, a sailmaker could exert the full force of his arm to drive needle through canvas (FIG 23). Using this method, he stitched "double flat," overlapped seams with "the best English-made twine of three threads, spun 360 fathoms to the pound" with 108–116 stitches per yard (approximately three stitches per inch).³⁷ "Sticking" or "stitching up" further strengthened the biggest seams with the addition of a line of doubled-thread stitches down the center.³⁸

Along a sail's edges, sailmakers tabled (hemmed) the canvas. The first step in this process was the use of a seam rubber to press the canvas into its new fold (FIG 23). If the edge ran diagonally on the canvas, sailmakers used a "cut tabling" and added a narrow rolled facing piece to prevent creasing which might stress the sail. Tabling required some 68–72 stitches per yard (approximately two per inch), and resulted in a hem ranging from 1½ inches to 6 inches wide, depending on the sail and the side.³⁹ The corners of certain sails had over a dozen layers of canvas in folded tablings and patch reinforcements.⁴⁰ Many of these construction techniques are represented by the canvas fragments from *DeBraak* (FIG 24).

After tabling, sailmakers attached bolt-ropes to edges to reinforce and give shape to the sail. Next, a pointed pegging awl was used to open holes in the canvas (rather than cutting threads) to work grommets.⁴¹ After the addition of a variety of rope "clues," "cringles," and other attachment points, sailmakers cured and stretched a sail to ensure a proper fit on the intended ship.⁴² The absence of roping *DeBraak's* canvas fragments is explained by the relatively small amount of sailcloth that survives from the ship's full complement.

For centuries, naval sails were produced in a variety of canvas grades to facilitate each sail's unique position and purpose.⁴³ *DeBraak's* sails included six grades of canvas, ranging from "Number 2" (41 pounds per bolt) to "Number 8" (21 pounds per bolt).⁴⁴ British regulations stipulated the warps of canvases Numbers 1–6 (the heavier grades) "shall be wholly wrought and made of double yarn, and shall contain, in every piece or bolt of 24 inches in breadth, at least 560 double threads of yarn, and in every piece of such sailcloth, that shall be 30 inches in breadth, at least 700 double threads of yarn." Numbers 1–4 canvases would have warps and wefts of equally strength which could be long flax, Italian hemp, or Braak [Baltic] hemp.⁴⁵ Many canvas fragments from *DeBraak* conform to the variety of weights, double-warp weave style, and flax and hemp fiber of British sails of this

era (FIGs 25–26).⁴⁶

After they had been bent onto the ship, *DeBraak's* sails required regular care to maintain their propulsive qualities. This work often fell to a shipboard sailmaker and other crewmen. *DeBraak's* sailmaker kept patches of sailcloth for repair work which were recovered tied into a packet (FIG 27). The same workers may have cut another type of coarsely woven material as a sort of shipboard matting (FIG 28).⁴⁷ Distinct from canvas, these fragments are woven in a 2/1 twill pattern with thick paired warp yarns, and include a long narrow roll and numerous other fragments, some stained with tar and all with cut edges.

DeBraak's artifacts contribute valuable data to our knowledge of textiles at sea and help build a more detailed chronology of change. To take only one example, *DeBraak* demonstrates, along with primary sources, leather jerkins, or jackets, so common on the *Mary Rose* of 1545, had been abandoned by seafarers long before 1798.⁴⁸ The *DeBraak* assemblage complements the myriad garments recovered from the *General Carleton* and suggests subtle ways in which seafaring textiles changed in a relatively short period. The vest fragments from *DeBraak*, for instance, represent a fashionable garment of 1798, distinguishable from those aboard the *General Carleton* of fourteen years previous. The *DeBraak* textiles are only a small sample of the fabrics originally used on the ship. In some cases, other wrecks help indicate what *DeBraak's* sample overlooks. In other instances, as with the ship's sails, primary documents suggest what survives is the merest fraction of the original whole.

Aboard *DeBraak* and on every other historical naval and merchant ship, textiles played a major role. In the most literal sense, fabric drove the ship, in the form of massive sails. But it also clothed sailors in both standardized and personalized ways. *DeBraak's* fragments reveal that even seamen on voyages far from home combined slop clothing with personal items while maintaining shipboard textiles to the best of their abilities. Many of the details these fragments reveal would have remained unknown had *DeBraak's* artifacts been ignored because of their unscientific recovery. In the end, *DeBraak's* real treasure lay not in Spanish gold but in humbler artifacts like these textile fragments and the many other small things that together formed the material world of life at sea at the end of the eighteenth century.

Acknowledgements

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Notes

1. Donald Schomette, *The Hunt for HMS De Braak: Legend and Legacy* (Durham, NC: Carolina Academic Press, 1993), 38.
2. On these wrecks see the following: Julie Gardiner et al., *Before the Mast*.

- Life and Death Aboard the Mary Rose* (Portsmouth: The Mary Rose Trust, Ltd., 2005); Carl Olof Cederlung et al., *Vasa I: The Archaeology of a Swedish Warship of 1628* (Stockholm: National Maritime Museums of Sweden, 2006); Lars Einarsson, "Artefacts from the *Kronan* (1676): categories, preservation and social structure," in *Artefacts from Wrecks: Dated assemblages from the Late Middle Ages to the Industrial Revolution*, ed. Mark Redknap (Oxford: Oxbow Books, 1997), 209–218; Christie's South Kensington, *Artefacts from HMS Invincible, 1744–1758. Catalogue* (London: Christie's South Kensington, Ltd., 1988); James P. McGuane, *Heart of Oak: A Sailor's Life in Nelson's Navy* (New York: W. W. Norton & Company, 2002); Catherine Sullivan, *Legacy of the Machault: A Collection of 18th-century Artifacts* (Ottawa: Minister of the Environment, 1986); and Lawrence Babits and Matthew Brenckle, "Sailor Clothing," in *The General Carleton Shipwreck, 1785*, ed. Waldemar Ossowski (Gdańsk, Polish Maritime Museum, 2008), 167–198.
3. Delaware Division of Historic and Cultural Affairs staff members Charles Fithian and Claudia Leister recall hearing this during the recovery of *DeBraak*.
 4. On *DeBraak*'s armaments, see Charles H. Fithian, "An Archaeological Analysis of the Armaments from H.M. Brig *DeBraak*," *MC&H*, 46, no. 4 (Winter 1994): 146–157.
 5. This paragraph is a summary of information found in Schomette, *Hunt for HMS De Braak*, 3–45. Schomette's book also details the recovery of and subsequent legal battles over *DeBraak*.
 6. A useful discussion and depiction of *DeBraak*'s crew's clothing is David Rickman and Charles H. Fithian, "Royal Navy Sailors, H.M. Brig *DeBraak*, 1798," *MUSA* pl. 725 (2000); Charles H. Fithian, "An Archaeological Analysis of the Armaments from H.M. Brig *DeBraak*," *MC&H*, 46, no. 4 (Winter 1994): 176–177.
 7. "The Manufacture of Wool Felt," *CIBA Review*, 11, no. 129 (November 1958): 4.
 8. David Corner, "The Tyranny of Fashion: The Case of the Felt-Hatting Trade in the Late Seventeenth and Eighteenth Centuries," *Textile History*, 22, no. 2 (Autumn 1991): 159.
 9. *Ibid.*, 155.
 10. The assemblage includes thirty-seven felt fragments besides those of a possible shoe insert. A previous study suggested this latter fragment was made from brown-wooled sheep and alpaca fibers, but I have been unable to confirm its usage as an insert through any other documentation. Report by Anne Peranteau, 2005, on file at the Delaware Division of Historical and Cultural Affairs, Dover, Delaware.
 11. Fiber identifications in this article are based on fiber microscopy performed on small samples at the Winterthur Museum by the author in the fall of 2010. For more detail, see the report and catalog on file at the Delaware Division of Historical and Cultural Affairs, Dover, Delaware.
 12. Rabbit and beaver fur are difficult to differentiate. Michael Henke of Fridrich Furs, Traverse City, Michigan, graciously provided me with a sample of beaver fur for comparative purposes.
 13. Babits and Brenckle, "Sailor Clothing," 176.
 14. I am grateful to Matthew Brenckle for bringing this source to my attention. Robert Lloyd, *Lloyd's Treatise on Hats* (London: Printed for the Author, 1819), 39. Silk-covered hats were in use by the 1780s, but they featured a wool felt body with a silk plush overlayer. Mary Elizabeth McClellan, *Felt, Silk & Straw Handmade Hats: Tools and Processes* (Doylestown: Bucks County Historical Society, 1977), 15.
 15. Kirstie Buckland made notes on this cap in 2008, on file at the Delaware Division of Historical and Cultural Affairs, Dover, Delaware. Heather Hansen provided valuable insights during a study session at Winterthur on 6 December 2010.
 16. George C. Neumann and Frank J. Kravic, *Collector's Illustrated Encyclopedia of the American Revolution* (Harrisburg: Stackpole Books, 1975), 138. An interesting comparison is the tall, brimmed knit cap purchased by Peter the Great at the Dutch East India Company shipyards in 1697, now in the collection of the Hermitage Museum in Leningrad. Kirstie Buckland, "The Monmouth Cap," *Costume*, 13 (1979): 23–37. Also note the round cap with turned-up brim recovered in pristine condition from a late seventeenth century Shetland gravesite: Audrey S. Henshall and Stuart Maxwell, "Clothing and Other Articles from a Late 17th-Century Grave at Gunnister, Shetland," *Proceedings of the Society of Antiquaries of Scotland*, 86 (1951–52): 30–42. A fringed and pattern-knit knit cap was recovered from the *General Carleton*: Babits and Brenckle, "Sailor Clothing," 179. I am grateful to Heather Hansen for insights drawn from her work reproducing the *DeBraak* cap, personal communication, 19 July 2012.
 17. The coat worn by Rear Adm. Horatio Nelson, RN, at the Battle of the Nile (the same year *DeBraak* sank) is one example of such simplicity, Amy Miller, *Dressed to Kill* (Greenwich, UK: National Maritime Museum, 2007), 113.
 18. Matthew Brenckle, "Slumming It on the Quarterdeck: Naval Officers' Sea-going Clothing in the Early Nineteenth Century," *MC&H*, 64, no. 2 (Summer 2012): 135–138.
 19. The first regulations for British sailors' clothing were set in 1857. Gerald Dickens, *The Dress of the British Sailor* (London: Her Majesty's Stationary Office, 1957), 6.
 20. Thomas Rowlandson's 1799 plates of Royal Navy uniforms, published by R. Ackermann, show a cook and a cabin boy wearing petticoat breeches. National Maritime Museum, Greenwich, UK.
 21. Florence Montgomery, *Textiles in America 1650–1870* (New York: W. W. Norton & Company, 2007), 218.
 22. Mercerization, invented in 1844, alters the microscopic appearance of cotton fibers.
 23. Scraps of fabric left from cutting garment pieces was known as "cabbage," and piecing a garment was called "cabbaging." "Cabbage, n.3," *OED Online*, June 2012 (Oxford University Press): www.oed.com (accessed 31 July 2012). The pocket remnants of the waistcoat are incomplete, making it difficult to determine whether they are flaps or false welts. I am grateful to Matthew Brenckle, James Kochan, and Charles Fithian for their input.
 24. Marilyn Palmer, *Framework Knitting* (Buckinghamshire, UK: Shire Publications, Ltd., 2002), 9–10.
 25. Heather Hansen, personal communication, 6 December 2010.
 26. Babits and Brenckle, "Sailor Clothing," 196.
 27. D. A. Saguto, "Footwear And Shoe-Related Artifacts Recovered from the Wreck of the HMS *DeBraak*—1798, Preliminary Report," (1987, on file, Delaware Division of Historical and Cultural Affairs, Dover), 4.
 28. *Ibid.*, 6.
 29. *Ibid.*, 9.
 30. For an interesting discussion of ribbons as fashion symbols, see Ann Smart Martin, *Buying into the World of Goods: Early Consumers in Backcountry Virginia* (Baltimore: The Johns Hopkins University Press, 2008), 167–172.
 31. Darcy Lever, *The Young Sea Officer's Sheet Anchor* 1819 repr., (New York: Edward Sweetman, 1955), 68.
 32. Based on tables for a 16-gun, 300–320-ton sloop in David Steel, *The Art of Sail-Making* (London: Printed for David Steel, 1796), 176–177. This is an approximate estimate; *DeBraak* was only 255 tons but after conversion by the British had rigging, masting, and sails similar to a 300-ton sloop-of-war. Charles Fithian, personal communication, 14 August 2012.
 33. Steel, *Art of Sail-Making*, 3–4.
 34. "The Trafalgar Sail," Portsmouth Historic Dockyard, <http://www.historicdockyard.co.uk/dockyard/trafalgarsail.php>, accessed 4 August 2012.
 35. Steel, *Art of Sail-Making*, 145.
 36. Julie Winch, *A Gentleman of Color: The Life of James Forten* (Oxford: Oxford University Press, 2002), 68.
 37. Steel, *Art of Sail-Making*, 19.
 38. *Ibid.*, 20.
 39. *Ibid.*, 20–21.
 40. John E. Horsley, *Tools of the Maritime Trades* (Camden: International Marine Publishing Company, 1978), 164.
 41. Steel, *Art of Sail-Making*, 21.
 42. Steel, *Art of Sail-Making*, 26, 28; Horsely, *Tools*, 164–181.
 43. The *Vasa*'s sails included several weights. Sven Bengtsson, "The sails of the *Vasa*: Unfolding, identification and preservation," *The International Journal of Nautical Archaeology and Underwater Exploration*, 4, no. 1 (1971): 33.

44. Steel's table for a 16-gun, 300–320-ton sloop indicates that such a ship carried no sails in Numbers 1 or 5 canvasses, Steel, *Art of Sail-Making*, 145, 177.
45. Steel, *Art of Sail-making*, 190. Braak hemp was associated with Saint Petersburg, Russia; G. Gregory, *A New and Complete Dictionary of the Arts and Sciences*, Volume III (London?: 1819), s.v. "rope."
46. Because of the microscopic similarity of flax and hemp, it was often impossible to determine the precise fiber content of *DeBraak's* canvas fragments.
47. Unfortunately, freeze drying conservation precluded fiber identification for these fragments. An unusually large textile fragment, folded into several layers measuring 15.5 inches by 19 inches has the appearance of a possible blanket, but shares the same weave size and structure as the matting. Distinct conservation treatments may have contributed to the differing textures.
48. On the *Mary Rose* jerkins, see Marian Forster, "Leather Jerkins," in *Before the Mast*, Gardiner, et al., 37–48.

Massachusetts Men in Gray at Fort Monroe, 1861 (Reprised)

Michael J. McAfee

SINCE a single illustration is reputedly worth a thousand words this brief article is meant to add significantly to Member Ryan B. Weddle's article of the same title appearing in the Winter 2011 issue of *MC&H*.

The gray flannel chasseur uniform issued to the first Massachusetts militia volunteers replaced the motley assortment of civilian and prewar militia uniforms in which they answered the call to war. This garb is described and explained on page 896 of Company Founder Frederick P. Todd's *American Military Equipage, 1851–1872*, a publication this author had the fortune to coauthor with Colonel Todd. I also published an article on this uniform, as worn by the 3d Regiment, Massachusetts Volunteer Militia, in the September–October 1997 issue of *Military Images* magazine, both publications being referred to readers for further information. The regimental history of the 6th Massachusetts aptly described these uniforms as "... a sort of Zouave suit consisting of gray voltigeur jackets,

single-breasted, with full trousers, and Fez caps with dark tassels for fatigue, and gray hats turned up on the sides, with red trim, for 'dress'... ."¹

The accompanying illustrations are from the author's collection or the holdings of the West Point Museum. Interestingly, the illustrations from the West Point Museum were done by a member of Company "C," of the 3d, 1st Lt. Samuel Emery Chamberlain, veteran of both the Mexican and Civil Wars. Chamberlain is of course perhaps best remembered for his Mexican War reminiscences published as *My Confession*.²

Notes

1. John W. Hanson, *Historical Sketch of the Old Sixth Regiment, Massachusetts Volunteers* ... (Boston: Cambridge Press, 1866), 21.
2. Samuel E. Chamberlain, *My Confession* (New York: Harper Brothers, Publishers, 1956).

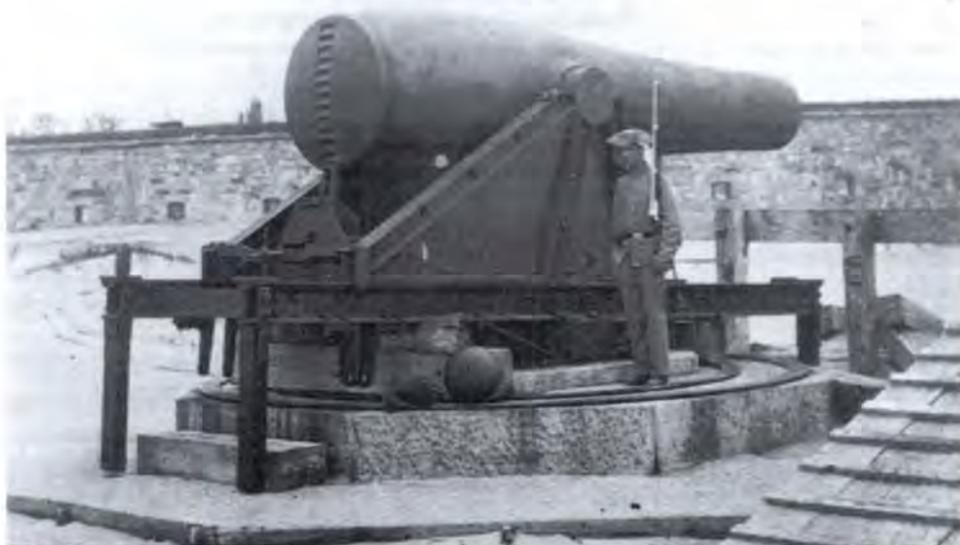


FIG 2. "Soldier of the 3d Massachusetts standing guard beside one of Fort Monroe's cannon." From a stereoview by New York City photographer George Stacy, collection of Michael J. McAfee.