WITH CUNNING NEEDLE
Four Centuries of Embroidery
THE PLIMOTH JACKET PROJECT

An exciting and innovative project to accurately re-create a 17th-century embroidered woman’s jacket began in 2006 at Plimoth Plantation in Massachusetts. The process of designing and making what has become known as the Plimoth Jacket has shed new light on the materials and techniques used by the skilled embroiderers of the 1600s. The project has brought forward a new understanding of the use of published design sources and their adaptation for particular projects. It has also enriched our understanding of the skill of professional embroiderers, who so often remain anonymous.

With the Plimoth Jacket as the touchstone, this exhibition looks at design, materials, techniques, and makers of embroidery from the 1600s through the 1900s.
Not an exact reproduction, this jacket is based on two examples in the Victoria & Albert Museum in London. One was chosen for its cut and construction and the other for the design of the embroidery. Both originals date to the 1620s.

In the 1600s this type of embroidery would have been done in professional workshops. By studying and re-creating such pieces, we can learn about workshop practices, embroidery techniques, and the technology for making threads and spangles (the sequins hanging from the lace). We can also look closely at the stitching to identify how many embroiderers might have worked on a project like this and whether they were highly skilled or simply apprentices.

More than 300 people spent some 3,700 hours creating this jacket. Some worked on the silk embroidery and gold plaited braid while others stitched on the “oes”—the term used in the 1600s for the round sequins. The lace was made by hand, and even some of the threads had to be re-created, as they are no longer available. The spangles were made using tools and techniques from the 1600s. Even the lining was hand-woven and dyed with natural indigo.

**Embroidered Jacket**
Made at Plimoth Plantation, Massachusetts, and other locations; 2006–9
Silk, gold, silver on linen
*Lent by Plimoth Plantation*
The choice of a design is fundamental for any form of embroidery. Designs of scrolls and flowers similar to those on the Plimoth Jacket were widely disseminated in books and as single prints. These published images followed fashions and by the late 1700s were available in both Europe and America. Professional artists, teachers, and embroiderers themselves copied or adapted such designs for their own use.
The most common method for applying an embroidery design to fabric was by drawing. Early scholarship on embroidery in America stressed the creativity of the designers and embroiderers, but both professional and non-professional pattern drawers were taught to copy and adapt designs.
Many artists drew needlework designs as part of their professional practice and often worked in different media. Samuel Folwell (1763–1813), who designed and painted this picture, advertised himself as an engraver, miniature and fancy painter, hair worker, and teacher of drawing and painting “upon Sattin, Ivory or Paper.” This design is a copy of an engraving by Folwell that appeared in the Philadelphia Repertory on May 5, 1810.

A label on the back of the frame states that Sarah Skinner Ward (1796–1844) worked the picture at Miss Maltby’s School in Philadelphia. Between 1802 and 1816 city directories list a widowed Sarah Maltby living within a block of the Folwells’ Dock Street School, where Folwell’s wife, Ann Elizabeth Gebler, taught embroidery.

Caliope & Clio
Designed and painted by Samuel Folwell
Worked by Sarah Skinner Ward
Philadelphia, Pennsylvania; 1810–13
Silk and tempera on linen
1991.46a Museum purchase
Engraved prints were widely distributed and were often the design source for silkwork pictures. In this instance, a print by Enoch Gridley after a painting by John Coles Jr. was copied onto satin and embroidered by E. S. Sefford.

Gridley was a portrait and general engraver working in New York City and Philadelphia. Coles, who advertised as a portrait, miniature, and heraldry painter, lived and worked in Boston and Worcester, Massachusetts, and Providence, Rhode Island. Sadly we have not yet discovered the identity of Miss E. S. Sefford.
Skillful artists—amateur and professional, male and female—often drew designs for quilts and embroidery for their friends. This design was done freehand in ink on a coarse linen. Only the name Elizabeth is inscribed on the back, suggesting that the design was drawn by someone other than the embroiderer. Look closely and you can see lines for another seat cover. The ink has bled through the linen ground, evidence that this unfinished piece was once intended to be one in a set of chair covers.

*Crewelwork chair cover (unfinished)*
Dedham, Massachusetts; 1730–65
Wool on linen
1991.39 Museum purchase
Today we expect artists’ creations to be unique, but in the past young artists were trained to copy as a basis for learning their skill. Designs could be copied by tracing; by “pouncing” colored chalk through holes punched along the lines of the original design onto paper; or by drawing freehand. Sabrina Colbath copied or traced these designs first in pencil and then in ink. Sabrina was born in 1810 in Middleton, Strafford County, New Hampshire, but nothing else is known about her life. Her brother Jeremiah was a teacher and land surveyor before inheriting the family farm. He had a reputation as a scholar and published many articles on local history.

Needlework designs
Drawn by Sabrina H. Colbath
Middleton, New Hampshire; 1825–35
Ink and graphite on paper
2003.33.1, .2, .4, .6, .10, .11 Gift of Linda Eaton
Ann Warder (1824–66), who was bedridden for much of her life, put together an immense collection of personal and published designs for needlework. It is documented that she shared them with family and friends. Most of the designs were for canvaswork and were probably worked in the brightly colored, soft yarns known as zephyr or Berlin wools. This type of needlework has been criticized for being unoriginal, but it is part of a long tradition of using prepared patterns for embroidery.

Selection of patterns
Owned by Ann Warder
Philadelphia, Pennsylvania; 1840–66
Ink, watercolor, cloth, paper
2004.71.80, .92, .102, .103, .110, .129, .134, .136, .139, .144
Gift of Van Tassel-Bauman American Antiques
The original owner of this box is unknown, but it may have been someone like Philena Moxley of Wenham, Massachusetts, who made a living by stamping designs on cloth for clients to embroider. The stamps themselves were made by professional artists and could be purchased by anyone wishing to embellish their own clothing and household items.

The box, which once contained a stamp, carries the name John D. Clapp. Clapp designed and manufactured embroidery stamps. He also stamped and embroidered patterns to order. A paper pattern found in the box has holes pierced through it. A cotton pad, covered in blue chalk, was used to “pounce” the pattern through those holes, thereby transferring the design.

**Box and embroidery stamps**
Probably Boston, Massachusetts; about 1890
Wood, metal
2006.20.10,b, .2-.11 Gift of Jan Whitlock
MATERIALS

One of the challenges of the Plimoth Jacket project was finding accurate materials, specifically embroidery threads, since many are no longer being produced. The twist, ply, and quality of threads made of natural fibers have varied over time as styles and fashions have changed. Because of the recent revival of high-quality historic reproductions of early embroidery, a wider variety of threads is now available to embroiderers.
Worked in Philadelphia almost certainly using imported silk threads, this picture by Margaret Rourke is one of a group of beautifully embroidered, flowering-tree silkwork pictures made by young women at schools in the city. In later life, Margaret Rourke Callender (1745–1819) was remembered as having excellent eyesight. According to a family history, at the age of seventy—and without eyeglasses—she embroidered a muslin cap for a grandchild.

**SILK**
China and Japan are well known for their raising of silkworms and production of silk threads. Large commercial production was also successful in Turkey, Italy, and France. In the 1700s and early 1800s smaller quantities of silk were produced in many parts of North America, including Georgia, South Carolina, Connecticut, New Jersey, and Pennsylvania.

**Silkwork picture**
Made by Margaret Rourke
Philadelphia, Pennsylvania; about 1754
Silk, glass beads on silk
1987.135 Gift of Mr. William L. Wool, Jr. in memory of Bessie P. Childs
Historian John Fanning Watson (1779–1860) collected objects associated with the early history of Philadelphia, including this skein of silk thread. In the 1700s, numerous individuals grew mulberry trees and raised silkworms. The best known today is Susanna Wright (1697–1785), who lived in what is now Columbia, Pennsylvania, and produced silk that was woven into dress fabric in London and presented to Queen Charlotte by Benjamin Franklin. Watson, who credits Wright with dyeing silk thread as well, also collected samples of silk by Catherine (1761–1808) and Martha (1769–1811) Haines of Germantown, outside Philadelphia.

Skein of silk thread
Pennsylvania; 1770–1800
Silk thread in wove paper
1958.102.14 Museum purchase
WOOL

Threads made from wool were used for various types of needlework. In fact, a type of embroidery known as crewelwork is actually named for the two-ply worsted yarns that were available commercially from at least the late 1500s. Although many examples of wool embroidery survive with a history of having been spun, dyed, and embroidered by a particular maker, it is more common to find that commercially prepared yarns were used.

Most surviving samplers were worked in silk, but a few were worked with two-ply worsted wool thread, known as crewel. Wool is not as slippery as silk and is therefore easier for the untrained hands of young girls to use when embroidering their first marking sampler. Jane Simons was ten years old when she worked this piece.

Wool marking sampler
Worked by Jane Simons
Oyster Bay, Long Island, New York; 1737
Wool on linen
1975.40a,b Museum purchase
In the 1820s a new type of wool yarn for canvaswork and embroidery became highly fashionable. Known as zephyr (referencing a gentle breeze) or Berlin wool (for the city where it was dyed such bright colors), it was made from woolen, rather than worsted, wool. Worsted wool is combed, aligning the fibers to make a stiffer yarn; woolen fibers are carded to make them soft. Worsted crewels are generally 2-ply (two strands twisted together), while the zephyr wools are mainly 4-ply and sometimes 8-ply. You can see the quality of the zephyr wool clearly in the flowers of this cushion cover.

Cushion cover
Norristown, Pennsylvania; 1856
Wool on wool
2003.50 Museum purchase with funds provided by Mr. Samuel Pettit in memory of his wife, Sally Pettit
The Deerfield Blue & White Society, founded in 1896 by Margaret and Ellen Whiting, created fine embroideries in contemporary and historic styles as part of the movement to revive traditional crafts. Most popular were their blue and white table mats, with motifs copied from historic bed hangings and bedcovers from the late 1700s. Because the originals were often badly damaged by moths, members of the society used linen thread dyed with natural indigo to obtain the appropriate color blue.

Round table mats
Made by the Deerfield Blue & White Society
Deerfield, Massachusetts; 1896–1926
Linen on linen
2011.26.5-7 Gift of Judith Coolidge Carpenter
Herdeg in memory of Ethel Warren Coolidge and Louise Coolidge Carpenter

Crewelwork curtain
Upper Connecticut River Valley, Massachusetts; 1730–80
Wool on fustian (linen and cotton)
1958.60.4 Gift of Henry Francis du Pont
In the early 1800s, embroidered cotton was highly fashionable for clothing and accessories. It continued to be used for fine handkerchiefs and infant and children’s clothing into the 1900s.

Whitework handkerchief
Europe; 1880–1920
Cotton on cotton
1969.2944 Bequest of Henry Francis du Pont
This rare bedcover was embroidered in cotton on muga silk by professional embroiderers in India. It was owned by a member of the Ashburnham family, most likely Sir John Ashburnham (1602/3–71), who served as Groom of the Bedchamber to King Charles I. Hand-spun cotton thread was exotic and highly prized at the time.

Muga silk is produced from a wild silkworm (*antheraea assama*) indigenous to northeastern India. It is golden and glittery rather than white and shimmery like silk from the common silkworm (*bombyx mori*).

Counterpane (detail)
India; 1600s
Cotton on muga silk
1968.46 Gift of Mr. and Mrs. David Stockwell
METAL THREADS
Gold and silver threads are still made in small quantities using traditional techniques. The most common type starts with gold or silver wire, which is drawn down to get the appropriate diameter and then flattened and wrapped around a thread core.

Professional embroiderers used lizardine, silk-wrapped purl, and other threads to create this sweet bag and knife sheath. Lizardine is made from a flat metal strip twisted around a form to make a coil. Purl is similar but is rounded and often wrapped with fine silk.

Sweet bags and knife sheaths were fashionable accessories worn by wealthy women. They were often given as gifts. These have a history of ownership in the Norris family, Philadelphia merchants whose ancestors are said to have been members of the court of Queen Elizabeth I.

Sweet bag and knife sheath
England; 1600–1630
Silk, gold, silver, linen
1958.102.17, .18 Museum purchase
Embroidered stomachers were a focal point of a woman’s dress, fitting within the front opening of the bodice. They could be the work of professional embroiderers, but this example was probably made by the wearer.

**Stomacher**
England; 1720–30
Silk, metal, cotton
1960.97 Museum purchase

Like stomachers, elaborately embroidered aprons could be made professionally or by the wearer. Schoolgirls from prominent families were taught the techniques of embroidering with gold and silver thread.

**Apron**
England; 1730–40
Silk with gold and silver on silk
1987.84 Gift of Irwin & Susan Richman
As fashions have changed over the centuries, so have the people who embroider, the objects they embellish, and the styles of embroidered decoration they create. The basic stitches, however, have remained fairly constant. Through the Plimoth Jacket project, a number of techniques that had fallen out of use were re-learned and are now being practiced by a growing number of fine needleworkers.
Pattern darning is a form of plain sewing that was used to repair clothing and household textiles, but the technique was also featured on highly decorative samplers that proclaimed the skill of the makers.

Darning sampler
England; 1716
Silk on linen
1961.357a, b Gift of Mrs. Giles Whiting
A related technique, called needle-weaving, was used to decorate this large bedcover and is also found on other crewelwork from Connecticut.

**Bed rug**
Worked by Mary Foot (1752–1837)
Colchester, Connecticut; 1778
Wool
1960.594 Bequest of Henry Francis du Pont
Canvaswork, worked in tent or cross-stitch, is a technique that has been practiced since the 1500s. It was worked on loosely woven linen until the 1800s, when a stronger, stiffer cotton canvas became available. The finished work needs to be carefully blocked before framing, as the tension of the stitches tends to pull the finished piece out of shape.

**Canvaswork chimneypiece**
Made by a member of the Whipple family
Salem, Massachusetts; 1748
Silk and wool on canvas
1965.1609a,b Bequest of Henry Francis du Pont

**Canvaswork portrait of Henry Clay**
Designed after a painting by John Neagle
Worked by Agnes D. Jackson
Rockaway, New Jersey; 1850
Wool on canvas
2001.14a,b Gift of Ruth Gardiner Rathburn Pitman
Lace can be made in two ways. Bobbin lace is made by winding threads onto bobbins and twisting them together. Because bobbins were often made of bone or ivory, this type of lace is often called bone lace. Needle lace is made with a needle and thread and is worked over a foundation of outline stitches using detached buttonhole stitches that are not worked through the ground fabric.

**Bobbin lace**  
United States; 1800–1830  
Cotton  
1965.2383 Bequest of Henry Francis du Pont

**Needle lace sampler**  
Worked by Sarah Keen  
Chester County, Pennsylvania; 1762  
Linen  
Bequest of Henry Francis du Pont
Tambour embroidery is worked on material that has been stretched taut by two wooden hoops. The technique is said to have been brought to France from India in the 1700s and was soon adopted by both professional and domestic needleworkers.

**Tambour petticoat (detail)**
France; 1700–1750
Wool on linen
2010.15 Museum purchase with funds provided by the Henry Francis du Pont Collectors Circle

**Fragment (detail)**
India; 1700–1800
Silk on cotton
1969.1246.1 Bequest of Henry Francis du Pont

**Tambour hook**
England; 1780–1820
Bone, iron
1980.20 Gift of Mr. and Mrs. Edgar Sittig
Named for the 2-ply worsted wool yarn used to create it, crewelwork was practiced in New England but rarely survives from other parts of the American colonies. The American versions are not as densely worked as their British counterparts and include stitches that require less embroidery thread.

Fine needlework like this was most often done within wealthy Connecticut families that owned slaves, allowing women enough leisure time to undertake such projects.

Crewelwork side curtain
Connecticut; 1750–1800
Wool on fustian
1957.44.1b Museum purchase
Queen’s stitch is one of the most complex and time-consuming stitches. Each unit is made up of four or five vertical stitches crossed in the center by a tiny horizontal stitch. It is found on samplers from the 1600s through the early 1800s and was often used to make gifts such as these garters and pocketbook.

**Pocketbook**  
Worked by, or for, Beulah Biddle  
Philadelphia, Pennsylvania; 1783  
Silk on linen, silver  
1958.2943 Bequest of Henry Francis du Pont

**Pair of garters**  
Worked by, or for, Mary Washington  
Virginia; 1753  
Silk on linen, wool  
1965.2082.1, .2 Bequest of Henry Francis du Pont
Makers

In the 1600s, embroidered women’s jackets were produced in professional workshops. Relatively little is known about the men and women who engaged in this trade in England.

Although much research has focused on schoolgirl work, decorative needlework was practiced by women of all ages and ethnicities, and even by many men. This section includes the work of professionals as well as those who embroidered for pleasure rather than profit.
Before the early 1900s, samplers were made by young girls as part of their education. There are two young women named Sarah Collins who might have created this example. Both were the daughters of wealthy landowners. Samplers made in America in the 1600s are quite rare, but clearly American girls were as skillful and as well educated as their contemporaries in Britain.

**Sampler**
Worked by Sarah Collins
Probably Salem, Massachusetts; 1673
Silk on linen
1987.1a,b Museum purchase with funds provided by the Henry Francis du Pont Collectors Circle
Sophie Bailly (1807–92) was the daughter of Joseph Bailly, a successful French fur trader, and Angelique McGulpin, a French/Native American woman who was also known as Bead-way-way. Sophie was adopted by Madelaine Marcot Framboise, whose sister Therèse was a teacher at the Protestant mission school on Mackinac Island, where Sophie worked this sampler.

Sophie was twenty-one years old when she worked the sampler and may have been a teacher rather than a student. She did teach at various Catholic schools in the region before marrying Henry Graveraet, a lawyer, who, along with one of their sons, was killed in the Civil War.

**Sampler**
Worked by Sophie Bailly
Mackinac Island, Michigan; 1828
Silk on linen
2010.30a,b Museum purchase with funds provided by the Henry Francis du Pont Collectors Circle
The Lombard Street School, where Olevia Rebecca Parker worked this canvaswork picture at the age of fourteen, was a public school for children from Philadelphia’s African American community. Canvaswork, sometimes called Berlin wool work, was commonly taught in schools in the mid-1800s.

Education was important to Olevia’s family and the free black community in Philadelphia. Olevia married Joseph Brister, a dentist, and their son James studied dentistry. He was the first African American to earn a degree from the University of Pennsylvania. Their daughter, named Olivia, became a teacher.

Needlework picture
Worked by Olevia Rebecca Parker
Philadelphia, Pennsylvania; 1852
Wool, cotton
2009.12.10, b Museum purchase with funds provided by the Henry Francis du Pont Collectors Circle
This sampler was made as a gift to celebrate the 25th wedding anniversary of Henry Francis and Ruth Wales du Pont in 1941. It incorporates objects from their collection as well as personal references: Henry Francis was sometimes known as “Tiger.” The Eleanor Roosevelt who worked the sampler was married to the son of President Theodore Roosevelt. Born Eleanor Butler Alexander (1880–1960), she and Mrs. du Pont were school friends.

Sampler
Worked by Eleanor B. Alexander Roosevelt
United States; 1941
Wool and silk on linen
1970.563a,b Bequest of Henry Francis du Pont
Made by a mother and daughter, both named Katurah Reeve, this embroidered bedcover commemorates a tragedy that befell a ship belonging to their son and brother, Selah Reeve. On October 25, 1819, the sloop *Patriot* was discovered “with her colors half mast—union side down,” badly leaking with almost all hands incapacitated by yellow fever. The crew was rescued, but the ship was lost.

The design is an accurate depiction of a three-masted ship frequently used for coastal trade. Note that two of the flags are upside down, the international code for distress.

*Embroidered bedcover (detail)*
Worked by Katurah Strong Reeve and daughter Katurah Reeve Van Duzer
Newburgh, New York; 1820
Cotton
1966.139 Gift of Mr. and Mrs. David Stockwell
Whitework embroidery was highly fashionable in the late 1700s and early 1800s and remained popular for children and infants’ clothing into the 1900s. Women in Scotland, Ireland, England, France, Switzerland, Italy, Germany, India, and elsewhere worked in their homes to satisfy the huge demand for “sewed,” “worked,” or “flowered” cottons used for making clothing, shawls, collars, caps, and other accessories. This type of “outwork” was poorly paid except at the highest levels. During the second half of the 1800s, hand work was eclipsed by the large quantities of whitework produced more quickly and cheaply by machine. The embroidery at the hem of the child’s dress was done by machine.
Baby cap
Worn by a member of the Sitgreaves or Bowman family
Philadelphia, Pennsylvania; 1820–40
Cotton on linen
1976.253 Museum purchase

Child’s dress
Possibly worn by a member of the du Pont family; 1850–70
Cotton
1969.4685 Bequest of Henry Francis du Pont
Warren Opie, born in 1835, decorated, and possibly made, his best summer uniform while serving on the steam frigate *Susquehanna* as it traveled from Norfolk, Virginia, to Japan. Sailors often decorated their best uniforms, which were worn on shore leave. Opie chose patriotic symbols for his uniform but embroidered his sea bag with names and images that reminded him of his home and family.

The *Susquehanna* was one of four ships commanded by Commodore Matthew Perry on his travels to Japan between 1850 and 1854. Opie perhaps took part in the ceremony as Commodore Perry delivered a letter from United States President Millard Fillmore to the Emperor of Japan as part of the effort to open trade between the two countries. The letter was carried in procession by a ship’s boy—the rank held by Opie.

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**Summer uniform of an enlisted sailor**
Worn by Warren Opie
Burlington, New Jersey; 1850–54
Linen, silk, wool
1967.933a,b Bequest of Henry Francis du Pont

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**Sea bag**
Owned by Warren Opie
Burlington, New Jersey; 1850–54
Linen, silk, wool, cotton
1967.932 Bequest of Henry Francis du Pont
Embroidered silks were popular and profitable exports from China in the late 1700s and early 1800s. Tradition of ownership tells us that this bedcover was probably brought back as a gift for a member of the Rupert or Grubb family of Delaware. Made in a professional workshop, this style of embroidery was popular in Europe as well as North and South America.

**Embroidered bedcover**  
China; early 1800s  
Silk, cotton  
2007.22 Museum purchase with funds provided by the Henry Francis du Pont Collectors Circle
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