Jill Goodwin and the Bayeux Tapestry

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Not many people will know that Jill Goodwin (1917-2013), one of the UK's foremost natural dyers and author of A Dyer's Manual *published in 1982, was involved in research relating to the Bayeux Tapestry. Alison learnt of this from Jill's daughter, Jenny, at the Cambridgeshire Guild. Together they looked through the archive of this work and Jenny recalled some of the details of her mother's amazing project.*

How the project started

On the 1 January 1983, Jill Goodwin received an unusual request. The French Ministry of Culture was seeking a practical dyer who would make a set of dye samples, on unspun fleece, for the Bayeux Tapestry restorers. Jill's name had been put forward by Dr A. D. Baynes-Cope, Conservator at the British Museum, who knew of her skills and experience as a dyer. Jill had been dyeing for over 50 years, starting at the age of six, inspired by the colourful illustrations in the book *A Nursery History of England.* Jill writes that she very nearly refused, being a busy partner in the family farm and with many other commitments. However, her interest was piqued, and she agreed to give it a go if she could do it in her own time and without any pressure. Little did the French know what they were embarking on with a dyer such as Jill. She threw herself into the work with determination and a strong sense of purpose. She wrote, *'I found myself beginning to think with the mind of a woman told to dye and embroider the record of a national defeat.'*



A page from A Nursery History of England *by Elizabeth O'Neill, published in 1912, a much-loved book which Jill owned as a young child, showing her early interest in history. The colourful illustrations inspired her first forays into dyeing*

The method and samples

Jill was sent a list of about 10 plants/insects that would have been known to the original dyers and embroiderers (thought to be centred around Canterbury). She was asked to explore these and any other dyes that she considered appropriate. She was also sent a bibliography of all the books and papers published on the Bayeux Tapestry, which she drew on to inform her research. Jill made it clear that it would take more than one growing season to tackle the task properly, explaining that colours produced would vary with sunshine, soil and rainfall, also that some of the ancient dye processes were long and slow.



Jill Goodwin with her woad patch in flower

The dyeing of the samples proved to be only part of the assignment; a great deal of time was spent growing or sourcing some of the rarer plants and insects. For example, she had the greatest difficulty tracking down a stand of dyer's greenweed *Genista tinctoria*, taking three months to hunt along the sea walls or flood banks of rivers in Essex and, at last, finding it in a dyke near Harwich. A sample of insects purported to be *Kermes*, obtained from Athens, turned out to be Polish cochineal *Margarodes polonicus* when tested in Paris and by the British Museum.

Jill's approach was to make several batches of dye from each plant, using both fresh or dried material and different kinds of water, mordants and modifiers. Some old recipes, such as for woad, involved fermenting the plant material with stale urine, bran or wood ash for several days or even weeks. Jill wanted to stretch each plant to its limit as a dye source, never throwing out a dyebath until all the colours were exhausted. Overall, she used both ancient and more recently available dyestuffs and mordants to produce a set of colours appropriate for the restorers (see Box 1).

Between 1983 and 1986, Jill made over 560 samples in her farmhouse kitchen or garden from some 50 different dyestuffs. These samples included 40 different shades of blue ranging from azure to almost black. The woad samples, tested in Paris, were exposed to 170 hours of bright light and all but the palest shades remained fast.



Jill's baskets of dyed yarns *All photos: Jenny Goodwin (unless otherwise stated)*

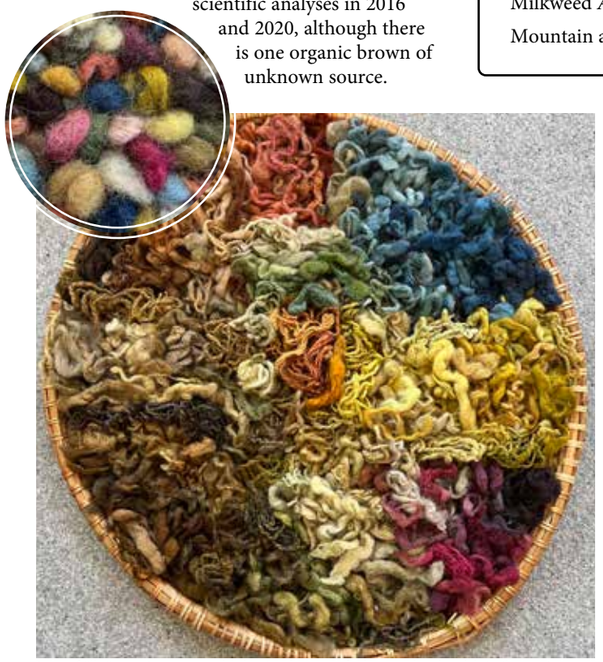
Do Jill's colours match the Bayeux Tapestry?

In 1985, *The Bayeux Tapestry: The Complete Tapestry in Colour* by David Wilson was published. It reproduced the entire work in high-resolution colour plates, large enough to reveal the extraordinary craftsmanship in minute detail. On receiving a copy, Jill wrote, *'I realised on looking at the colours closely how like they are to the cover of my book. I was glad not to have seen David Wilson's book at the start of the assignment, otherwise I might have attempted to copy the colours rather than doing what I'd been asked, that is to produce a bank of samples of colours for future use by the restorers'.*

However, when asked to select her sample colours that most closely resembled the originals, she noted that the Bayeux Tapestry colours were faded in comparison with her fresh samples and thus she couldn't match them to the most likely sources. She said ruefully, *'I wish I knew more about fading and the chemistry of it. Life is not long enough to fit everything in'.* She added, *'Perhaps the Saxon dyers only used woad, weld and madder in combination, that would account for the harmony of colour in the whole textile'.* And this is what was confirmed by the recent scientific analyses in 2016 and 2020, although there is one organic brown of unknown source.

Box 1: List of dyestuffs used by Jill Goodwin to produce the colours of the Bayeux Tapestry

Alexanders *Smyrnium olusatram*
Beach Rose (hips) *Rosa rugosa*
Bhutan indigo *Indigofera sp.*
Bracken *Pteridium aquilinum*
Burnet rose (hips) *Rosa spinosissima*
Chicory *Cichorium intybus*
Dyer's greenweed *Genista tinctoria*
Elder *Sambucus sp.*
Elecampane *Inula helenium*
Eucalyptus *Eucalyptus sp.*
Forsythia *Forsythia sp.*
Gipsywort *Lycopus europaeus*
Goldenrod *Solidago sp.*
Hedge bedstraw *Galium mollugo*
Hollyhock *Alcea rosea*
Horseradish *Armoracia rusticana*
Japanese indigo *Persicaria tinctoria*
Laburnum *Laburnam anagyroides*
Logwood *Haematoxylum campechianum*
Lichen *Ochrolecia tartarea*
Madder *Rubia tinctorum*
Mahogany *Swietenia sp.*
Mallow *Malva sylvestris*
Marjoram *Origanum majorana*
Milkweed *Asclepias sp.*
Mountain ash *Sorbus aucuparia*
Mullein *Verbascum thapsus*
Myrobolan *Prunus cerasifera*
Orange ball tree *Buddleja globosa*
Polish cochineal *Margarodes polonicus/Porphyrophora polonica*
Padauk *Pterocarpus sp.*
Pecan *Carya illinoinensis*
Poplar *Populus sp.*
Privet *Ligustrum sp.*
Sanderswood/red sandalwood *Pterocarpus santalinus*
Scrottyie (the Shetland name for crotal/crottle) *Parmelia saxatalis*
Sequoia *Sequoia sp.*
Sorrel *Rumex acetosa*
Spurge *Euphorbia sp.*
Sumac *Rhus sp.*
Tansy *Tanacetum vulgare*
Trifid bur-marigold *Bidens tripartita*
Tickseed *Coreopsis verticillata*
Toadflax *Linaria vulgaris*
Walnut *Juglans sp.*
Weld *Reseda luteola*
Wild marjoram *Origanum vulgare*
Willow *Salix sp.*
Woad *Isatis tinctoria*
Yarrow *Achillea millefolium*



Some of Jill's Bayeux Tapestry samples showing the range of colours produced, and their vibrancy (inset)



Some of Jill's samples dyed with woad using ancient fermenting methods



Examples of Jill's mounted samples that were sent to the Museum of Ancient Monuments in Paris for storage *Photos: Lesley Ottewell*

What became of Jill's work?

In the end, it turned out that the Bayeux Tapestry wasn't restored at that time, rather it was gently cleaned, examined, and rehung for exhibition in its new home. All of Jill's dye samples, mounted on card holders with accompanying charts, were allegedly stored in the Museum of Ancient Monuments in Paris. Nothing has been heard of them since. Jill retained a set of what she termed 'my working samples' on cards and old margarine tub lids (very practical) for her own records. Not one to give up on a challenge, Jill continued to grow and experiment with ancient dyes long after the main project work ended, explaining, *'I am leaving no stone unturned and am trying it out of intellectual curiosity*'.

In 2009 (aged 92 years), Jill wrote, *'Perhaps I should point out that the work I did must have been of very minor importance in the overhaul of the tapestry, probably involving no more than a short footnote, if that. At best it will have convinced the French that "Perfidious Albion" is still capable of fielding a dyer of comparable skill to the makers of the Tapestry*'.

As dyers, we all know about Jill's contribution to the study and recording of natural dyes through her seminal book. Now we can add to that her extraordinary work on the Bayeux Tapestry. What an incredible woman – an inspiration to all dyers and would-be-dyers!

Acknowledgements: thank you to the Mid Essex Guild, who are the custodians of Jill Goodwin's Bayeux Tapestry Archive, for their permission to look at the material and to publish this article. Special thanks to Lesley Ottewell, Mid Essex Guild Archivist for many years, who assembled Jill's numerous papers so efficiently.

Further reading

Goodwin, Jill (1982) *A Dyer's Manua*l. London: Pelham Books. Second edition (2003) Ashmans Publications.

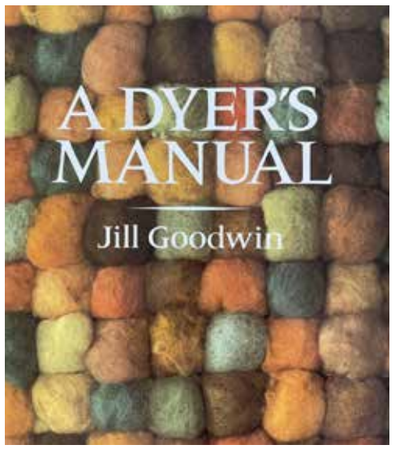
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Front cover of A Dyer's Manual *by Jill Goodwin, published in 1982 and representing 50 years of dye experiments, starting at the age of six*

See *Notes on Health and Safety* on p.45.



Jill and friend dyeing with woad

About the authors: *Alison Stattersfield attended a natural dye workshop in the 1970s in Norfolk with her mother and tried some 50 different dyestuffs with different mordants and modifiers. This inspirational experience, most likely tutored by Jill Goodwin, led her to study natural dyeing in later life.*

Jenny Goodwin trained as a nurse-midwife and worked in the NHS, then overseas with Save the Children UK for many years. She was fascinated by her mother's textile crafts early on in life. She learnt to spin in her teens. Before retirement, she became Jill's full-time carer, wool preparer and dye assistant, ensuring Jill could continue spinning and producing colourful textiles until her death in 2013. This period gave Jenny an opportunity to learn from Jill and develop her own skills as a plant dyer. One day, Jill gave her a package saying, 'This is my set of the dye samples that I produced for the Bayeux Tapestry restorers — do what you like with them'. On opening the package, Jenny was dismayed to find that Jill had recently removed the labels indicating the specific dye lots! However, she is delighted that Jill's hard work on the Bayeux Tapestry dyes is now recorded for publication.