



# Zoe Finlay Paper Conservation

Newsletter #7, April 2013

## WELCOME!

Hello and welcome to the latest newsletter from Zoe Finlay Paper Conservation. As the arrival of the Lindisfarne Gospels in Durham draws near, this issue looks at manuscripts, from documents that provide an historical insight into everyday lives to the awe-inspiring illuminated manuscripts.

If you are planning a visit to see the Lindisfarne Gospels, I hope the article on the contents of illuminated manuscripts helps you to recognise many of its key elements and increases your enjoyment and understanding of this important national heritage document.

Meanwhile, this month's 'From The Studio' discusses an 18th century document which has been written in an ink which we have known since antiquity – and for which an ideal conservation solution still eludes us.

Last but not least, Zoe Finlay Paper Conservation recently celebrated its second birthday! I'd like to thank all of my valued customers and readers of this newsletter for their support and continuing interest. It's been a fantastic two years and I look forward to many more to come.

Enjoy reading!

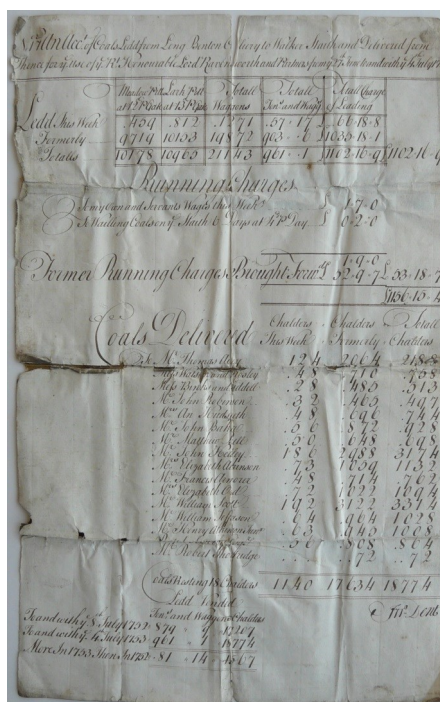
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## FROM THE STUDIO

### A wasp in the ointment

Recently, an 18th century handwritten document arrived into the studio for conservation; one that challenged me to find the best solution to treating an age-old problem. The document recorded the coal sales of Lord Ravensworth and Partners, the influential North East colliery-owning company who later were to employ the prestigious engineer, George Stephenson.



The paper was in excellent condition; strong, with legible ink and only minor surface dirt and tears. So how could this sheet of paper pose such a dilemma, one shared with some of the world's most ancient and important documents? The ink used was iron gall ink, a medium of peculiar origins and which, despite its

historical importance to world history, still causes significant debate in conservation.

It is not know exactly when iron gall ink first came into use; however, it has been known since antiquity and its use only declined in the early 20th century. Recipes varied wildly as did their results, leaving us with manuscripts, maps, music scores, letters, certificates and accounts, some of which remain perfectly legible whilst others may be so delicate that a person breathing on them too closely could mean the permanent loss of historical information.

Use of the ink rapidly spread worldwide; it was cheap, portable and simple to prepare although the principal ingredients of the ink, whilst readily available, were somewhat bizarre. They consisted of ferrous sulphate (an iron salt) and gall nuts, which grow on oak trees.

Whilst many varieties of galls are found, their varying quality affects the finished ink. An insect, the gall-wasp, punctures the leaves, twigs or branches of the oak tree and lays its eggs within the tissues. As hatched larvae feed, the tree attempts to calm the irritation by forming a gall nut which inadvertently protects the larva with food and shelter until it is able to burrow out of the nut. The growing gall nut absorbs acids which, when extracted from the nut after it has been crushed and soaked in wine or

beer for a week, are clarified. After the addition of iron crystals, water and a thickener, an ink is produced.

Initially purple-grey in colour, the ink darkens after a week of stirring and exposure to the air. Several years later, the ink's reaction with the air turns the ink to the dark brown or black colour that we see today.

It is the presence of the iron and acids within the ink which cause future problems. The resulting chemical reaction corrodes the paper, causing damage at or near inked areas. The ink often lightens to a pale brown and haloes can appear around letters. In advanced stages of decay, inked areas can crack, appearing as fragile as if the paper has been burnt by fire. These areas can drop out, leading to the complete loss of information.



**Lost letters on this envelope addressed to Isambard Kingdom Brunel's family,** (image courtesy of the Bodleian library, 2007).

Worse still, the metal ions responsible for this decay can readily move about the paper with slight increases in humidity, spreading their effect into un-inked, previously healthy areas.

With these factors in mind, the options for the repair of this document were restricted. Torn, curled areas hid information but moisture is usually required to

gently press these before repair. Furthermore, the wheat starch paste adhesive normally used for paper repair holds too much moisture to be used with safety for this document.

A solution was arrived at which used pure alcohol to relax the un-inked paper. Instead of paste, a sieved, high-strength gelatine was used as this adhesive has been proven to not only reduce immediate risk but actually retard movement of the metal ions.

Instead of pressing the whole document, which would have required more moisture, a folder was made to accommodate the undulations of the paper safely, balancing immediate aesthetic improvement with the long term chemical stability of the document.

There are various chemicals currently used to counteract iron gall ink deterioration, but they represent extreme intervention and are not without risk and controversy. Until a safer method is devised, minimal intervention followed by safe housing and environmental control still provides the best answer to this age-old problem.

Whilst the presence of iron gall ink can only be confirmed by chemical testing, if you have certificates, letters or manuscripts that date from before the early 20th century and have handwriting on them, there is a good chance that it is iron gall ink. Have a look: is there any blurring around the edges of the letters? Turn over the paper; is there a pale brown image of the letters visible on the reverse; or perhaps you have missing areas already?

Keep your document protected from damp environments; if it is stored in the attic or cellar, move it to a drier area of the house and store within acid-free materials. Check regularly for signs of deterioration (a camera can help future comparisons), and if you have any concerns, please don't hesitate to contact me.

## ILLUMINATED MANUSCRIPTS

### Some Common Features and Designs

Illuminated manuscripts are known throughout western and eastern cultures and the earliest known surviving example is probably an Arabic manuscript dating from AD 400 to 600. Early illuminated manuscripts may have been produced for aristocrats, monasteries and monarchs and were intended to spread religion and learning on a range of subjects.

Before paper production became widespread, papyrus was a commonly used material, closely followed by parchment. These smooth surfaces lent themselves well to calligraphy and illumination; they were, however, time consuming to prepare. As paper was a cheaper and easier material to produce, and it did not rely on a stock of the papyrus plant growing nearby (an impossibility in cooler climates), it eventually took over. During Roman times, the scroll was the dominant format and the book as we know it today (the 'codex'), was not to dominate for several hundred years.

Often produced by multiple talented scribes and artists,



illuminated manuscripts contain a surprising amount of recognisable features and stylistic design. A glossary of common features, many of which can be seen in the Lindisfarne Gospels, are introduced below. I hope these help to give you an understanding of these great works of art.

**Carpet Page:** An ornamental page of geometrical artwork (no text) popular with the *insular* style (see below). Often inserted at the start of the text or a new section.

**Furniture:** Metal clasps attached to the covers to prevent swelling of the parchment and/or paper pages with changes in humidity.

**Gloss:** A brief notation in the margins or between the lines of text, sometimes in a different language to the main text.

**Historiated initial:** An enlarged letter at the start of a paragraph containing figures or animals in a narrative scene.

**Inhabited initial:** An enlarged letter at the start of a paragraph or chapter containing animal or human figures of a decorative nature, lacking a narrative.

**Insular:** A style common in the British Isles during the years 550-900AD which integrated decoration, script and text.

**Line Filler:** Decoration filling the remainder of a line not occupied by script.

**Pricking:** The often-visible marking of a page with a point or knife to guide accurate ruling for the text.

**Rubric:** A chapter heading or title which may not be part of the text but which introduces an element of it. It is usually written in red ink.

DON'T FORGET TO CHECK MY WEBSITE FOR LINKS TO LOCAL AUCTIONEERS, FRAMERS, ANTIQUE SHOPS AND BOOKSELLERS, AS WELL AS FOR MY REGULAR BLOGS.

PREVIOUS NEWSLETTERS CAN BE FOUND ON MY WEBSITE.

## BOOK OF THE QUARTER

In keeping with the focus on illuminated manuscripts, this quarter, I have taken the chance to highlight manuscripts of a less well-known origin.



**Codex Borbonicus**, a page from this 14.2m long manuscript (possibly Pre-Columbian), (image courtesy of [www.famsi.org](http://www.famsi.org))

Mexican illuminated, or 'pictorial' manuscripts have a unique style. Their vibrant colours and patterns offer a fascinating insight into these ancient cultures.

Their production pre-dates the Spanish Conquest and continued long afterwards. Using a variety of materials such as paper, deer skin and tree bark, the manuscripts contain hieroglyphs, patterns and figures. The pages read from bottom to top, their content revealing much about land ownership and the customs of early Aztec and Mayan cultures.

For me, these manuscripts are full of character and deserve much more time in the spotlight.

## LOCAL EVENTS

**EVENT: Baltic Artist's Book Fair**, Baltic Centre for Contemporary Art, Gateshead, 14th-15th June, [www.fabulousbooksfantasticplaces.wordpress.com](http://www.fabulousbooksfantasticplaces.wordpress.com)

**VISIT: Heritage Skills Festival**, Tyne-mouth Station, 28th-30th June [www.tynemouthmarkets.com/heritage-skills-festival/](http://www.tynemouthmarkets.com/heritage-skills-festival/)

**EXHIBITION: The Late Shows**, various arts venues, Ouseburn, Newcastle, 17th – 18th May. [www.thelateshows.org.uk](http://www.thelateshows.org.uk)

**WALK AND TALK: The Role Of Antiquarians in Newcastle**. Sunday 30th June, 1-3pm, meet at the Castle Keep. Walk in the footsteps of Newcastle antiquarians, led by local historian, Freda Thompson. Email: [email@greatnorthmuseum.org.uk](mailto:email@greatnorthmuseum.org.uk) or call (0191) 222 5121

**TALK: 'In advance of the Lindisfarne Gospels – the Celtic context'**, Ronald Blythe, writer, essayist and editor (free admission, no booking required), Newcastle University, Curtis Auditorium, Herschel Building, Tuesday, 7th May, 5.30-6.30pm, [www.ncl.ac.uk/events/public-lectures/month.php?m=May2013](http://www.ncl.ac.uk/events/public-lectures/month.php?m=May2013)

**EXHIBITION: Lindisfarne Gospels**, Durham Palace Green Library, 1st July – 30th September. You're well advised to book your tickets. [www.lindisfarnegospels.com](http://www.lindisfarnegospels.com)

## ... AND FURTHER AFIELD

**VISIT: Robert Smalls Printing Works**, National Trust for Scotland, Innerleithen. Visit this preserved printing works for an insight into the printing industry. [www.nts.org.uk/Property/Robert-Smalls-Printing-Works/](http://www.nts.org.uk/Property/Robert-Smalls-Printing-Works/)