

# BOOKS & BEASTS



## Parchment Identification from Conservation Waste

Scientists, Conservators and Humanities Scholars are working together in the Books & Beasts project to harness value from the waste from conservation treatment of manuscripts.

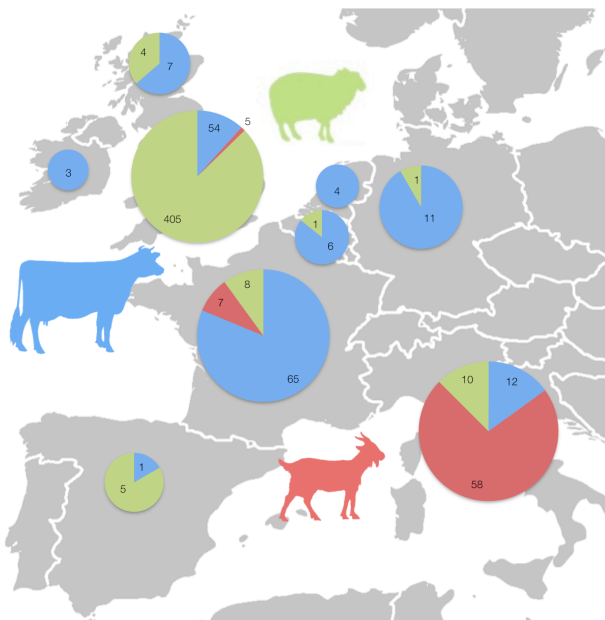
By simply collecting the eraser waste generated when dry cleaning a manuscript we offer to provide species identification of that manuscript.

The process is very simple:

- Collect any waste eraser residue generated when superficially cleaning parchment
- Place into a sterile tube (supplied as part of the sampling kit we provide)
- Keep at room temperature until you wish to send a batch of samples off for analysis
- Post your samples to us and in approximately 48 hours after receiving the samples we will supply you with the species identification of your samples (via Google Docs).

We determine the species of animal used to make the parchment through protein mass spectrometry (MALDI-TOF) of the collagen molecules extracted from the eraser waste.

The collagen molecules are cut into smaller fragments (peptides) that render a unique profile for each animal (peptide mass fingerprint).



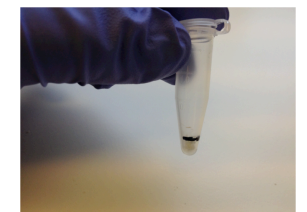
Through this technique we have been able to analyse over 900 separate parchment samples. These analyses have provided us with vast information about geographic distribution of livestock and animal preference for codices vs archival records.

In addition to this invaluable information we are currently working on the development of a Parchment Quality Index (PQI) which informs about the potential damage incurred in the parchment from its production (usually

due to liming). We hope that this index will develop into an interesting tool for conservators that may help inform conservation decisions.

For further information please contact:

matthew.collins@york.ac.uk  
sarah.fiddymment@york.ac.uk



Sample No	Accession No	Year of Origin	Country	Material	Species	Quantity	Notes
1	10000001	1500	France	Parchment	Cow	100	
2	10000002	1500	France	Parchment	Sheep	50	
3	10000003	1500	France	Parchment	Goat	20	
4	10000004	1500	France	Parchment	Cow	100	
5	10000005	1500	France	Parchment	Sheep	50	
6	10000006	1500	France	Parchment	Goat	20	
7	10000007	1500	France	Parchment	Cow	100	
8	10000008	1500	France	Parchment	Sheep	50	
9	10000009	1500	France	Parchment	Goat	20	
10	10000010	1500	France	Parchment	Cow	100	
11	10000011	1500	France	Parchment	Sheep	50	
12	10000012	1500	France	Parchment	Goat	20	
13	10000013	1500	France	Parchment	Cow	100	
14	10000014	1500	France	Parchment	Sheep	50	
15	10000015	1500	France	Parchment	Goat	20	
16	10000016	1500	France	Parchment	Cow	100	
17	10000017	1500	France	Parchment	Sheep	50	
18	10000018	1500	France	Parchment	Goat	20	
19	10000019	1500	France	Parchment	Cow	100	
20	10000020	1500	France	Parchment	Sheep	50	
21	10000021	1500	France	Parchment	Goat	20	
22	10000022	1500	France	Parchment	Cow	100	
23	10000023	1500	France	Parchment	Sheep	50	
24	10000024	1500	France	Parchment	Goat	20	
25	10000025	1500	France	Parchment	Cow	100	
26	10000026	1500	France	Parchment	Sheep	50	
27	10000027	1500	France	Parchment	Goat	20	
28	10000028	1500	France	Parchment	Cow	100	
29	10000029	1500	France	Parchment	Sheep	50	
30	10000030	1500	France	Parchment	Goat	20	