



Beneath the Ink: The Hidden Craft of Medieval Manuscripts

Carol Barbon, Shelby Andrews, Alex Bierlmeier, Ben Choinski



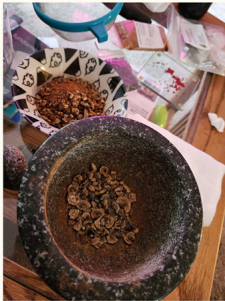
Our Goals

- ❖ To participate in the process of manuscript production and ink blending **using medieval materials.**
- ❖ To observe the **stages and various challenges** of manuscript and palimpsest production.
- ❖ To build an **honest understanding** of medieval manuscript production.



Our Methods & Observations (Ink)

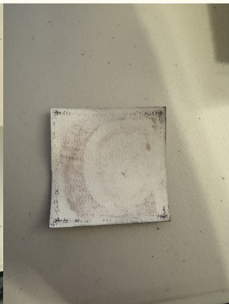
- ❖ Inks were blended according to **medieval recipes encountered in our research.**
 - Oak galls were crushed and divided into jars with aqueous mediums such as **rainwater, tap water, distilled water, white and red wine.**
 - **Cochineal shells were ground up into a paste** and divided into jars with the different waters.
 - **Brazilwood followed this same process.**
- ❖ After three days, we divided our liquids in half.
 - **Ferrous sulphate** was added to all jars containing oak gall.
 - **Gum arabic and tempura** were added as **binding agents**, split evenly across our jars.



Our Methods & Observations (Writing)

- ❖ Application of ink on goatskin parchment was done with a **homemade feather quill**.
 - Ink was applied to the surface at a forty-five-degree angle, leading to **unnatural writing posture** by today's measure.
 - **Significant changes in pigmentation** occurred for all ink **except oak gall** during the drying process.
- ❖ Ink removal was performed with **fine sandpaper**.
 - This process offered significant **diminishing returns**.
 - The resulting surface of our palimpsest was **smooth and hydrophobic**.





Our Conclusions

- ❖ Medieval manuscripts represent **monumental productions**.
- ❖ **Specialty skills** are required in every stage of the process.
- ❖ The difficulty of creating palimpsests may suggest **specialty roles and training** within medieval scriptoria.
- ❖ The creation of inks and manuscripts in the Middle Ages required **ingenuity, adaptability and creativity**.
- ❖ Interactions between medieval materials demand **experience and problem solving**.



Bibliography

- ❖ Clement, R. (1997). *Medieval and Renaissance Book Production*. Utah State University Library Faculty & Staff Publications.
- ❖ Colini, C. (2021). Ink Recipes from the Islamic Era: Texts, Manuscripts, Ink Replication, and Scientific Analyses. In *Bridging the Gap: Disciplines, Times, and Spaces in Dialogue–Volum 1: Sessions 1, 2, and 5 from the Conference Broadening Horizons 6 Held at the Freie Universität Berlin, 24–28 June 2019*, pp 172-186. Archaeopress Publishing Ltd.
- ❖ Haraszti, Z. (1928). *Medieval Manuscripts*. The Catholic Historical Review, 14(2), pp. 237–247.
- ❖ Kroustallis, S. (2011). *Binding media in medieval manuscript illumination: a source of research*.
- ❖ Leahy, K. (2010). *Parchment and vellum*. In Anglo-Saxon Crafts, pp. 89–93. essay, The History Press.

- ❖ Melo, M. J., Castro, R., Nabais, P., & Vitorino, T. (2018). *The book on how to make all the colour paints for illuminating books: unravelling a Portuguese Hebrew illuminators' manual*. *Heritage Science*, 6(1), pp. 1–8.
- ❖ Modern History. (2019). *Secrets of medieval ink; how was it made?* [Video]. Youtube: <https://www.youtube.com/watch?v=WHz3LuFyvek>.
- ❖ Wattenbach, W. (1896). *Das Schriftwesen im Mittelalter*, pp. 302-304. Leipzig : Hirzel.