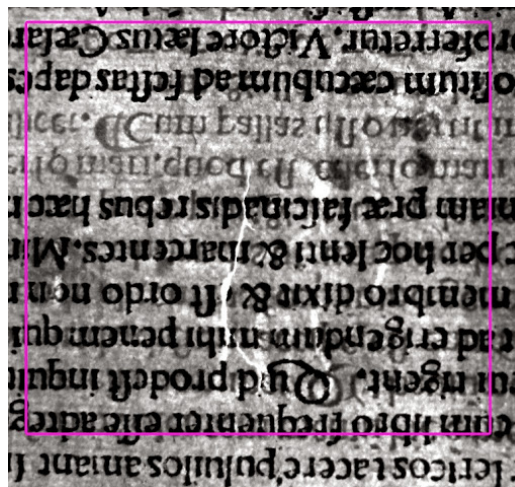


La Colomba

By Rachel Lapkin

FIFTEENTH-CENTURY WESTERN European paper is known for its exceptional quality and durability, even as it transitioned from manuscript use to print. Supporting evidence and experience through my career as a book conservator has reinforced this historical teaching, which is why a curator's request to meet about accessing a brittle incunable in Brown University's collection took me by surprise. I thought I had misheard or misinterpreted the conversation. Perhaps the book was a facsimile, it had been rebound and the endpapers were now brittle, or it was a reference work on early printed books in rough shape. However, the book in question was not any of these things. The John Hay Library's 1481 copy of *Opera cum commentario Acronis et Porphyryonis* by Horace (ISTC ih00451000) is indeed brittle, as extreme as most 19th century wood pulp newsprint. In order to recommend a method of use and storage, I needed to understand how this item degraded to such a fragile condition.

Opera was being housed horizontally on its own shelf in a locked cabinet with other special collections materials in an open faced, acidic corrugated board tray slightly larger in length and width, and slightly shallower in depth than the item. Areas of the tray floor, unoccupied by the binding, held shards of dark tan paper, some with partial letter forms. At some point in its life, the book had been rebound in full leather with five raised supports and decorated in a characteristic 18th-century English binding style with a very simple blind tooled double panel design, the inner panel with four corner stamps. Opening the upper cover to reveal the contents, I noted that 95% of the text block had cracked from head to tail and separated from the gathered text block.



Dove watermark, *Opera...*, Brown University. Image enhanced by Lindsay Elgin, Photographer, Digital Technologies, BUL.



Even with foam wedges, a microspatula and deliberate movements it was impossible to turn a page of this book without inflicting new strains on the paper.

William E. Foster, Brown University class of 1873, served as Librarian of the Providence (R.I.) Public Library from 1877–1930. Foster collected 600 volumes of Horace works during his lifetime and his widow donated the collection to Brown after his death. The entry for item number 340 in volume 2 of Foster's c.1928 accession books is cataloged as, "Horace. *Opera*...[?Treviso Michele Manzano 13 Aug., 1481]... Very rare... Last few leaves stained and wormed and a few leaves have some letters erased." The record continues in detail about the binding: "full levant goat...H. 11 1/2;" the bibliographic description; and one other piece of provenance, "Purchase, from Goodspeed's Book shop, June 7, 1928. No. 426 in Catal No. 13 (1928) of E. Guntrip. Tonbridge, Eng [£8. 10s.]." Although the Tonbridge Historical Society confirmed a bookseller called E. Guntrip

was in business in Tunbridge Wells in 1928, they could offer no other information on secondhand sellers or bookbinders in the area.

Printed in black ink with hand applied initials in blue, red and gold, Brown's 1481 copy of Horace's *Opera* shows insect and severe mold damage to the paper support, as well as instances of opaque, bright white specks throughout, color shifts to the majority of applied pigments, along with faded and mostly illegible marginalia. As already noted, the support itself is severely discolored and does not exhibit chain or laid lines to the naked eye. The binding description and height measurement Foster recorded are consistent with the current binding but the overall condition appears to have dramatically worsened from the accession book account.

Its physical state was so far beyond a few problematic leaves and so uncharacteristically poor that I found myself questioning this item's supposed 15th-century Italian inception. Other conservators I approached for an opinion were equally as skeptical. Was this item in fact genuine? How could I attest to its authenticity based on the physical evidence?

Incunabula of the same title from the same region printed during the same year attributed to the same printer may begin life as somewhat uniform printed copies of one another but progress as distinct volumes with unique hand applied initials, decorations and bindings. Ownership, scholarship and environment continue to alter the original form with marginalia, physical manipulation of the object itself and reactions to different storage conditions. In its current state, Brown's 1481 *Opera* is essentially unusable to scholars wishing only to access the text, never mind studying the particular style of the initials or the legacy of notations throughout, all details of potential interest to both the curator and future researchers.

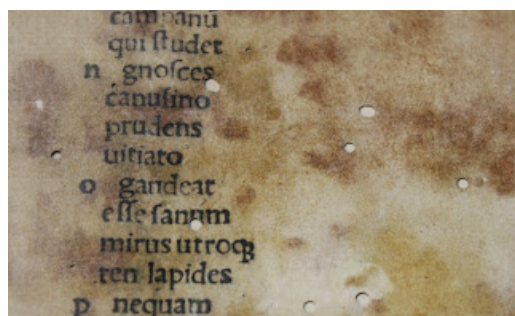
I had to learn more about this puzzling item but circumstances limited both expenses and the amount of time I had to propose

questions, draw conclusions and make recommendations for this book. The initial phase of my inquiry required me to identify my objectives: verify authenticity, explain the extreme brittle state of *Opera*'s paper through low or no cost testing, define its current value as a research object and then determine appropriate treatment. Next, I had to formulate my methodology: examine institutional memory and resources, verify status with other library holdings and perform multiple tests identifying paper characteristics.

With no documented treatments in evidence, my ideas for investigations reverted to identifying storage locations since coming to the library; a physical comparison to other institutional holdings of the same imprint as well as products of the same printer or geographical area (perhaps all paper from this region is problematic) identified through the British Library's Incunabula Short Title Catalogue; a combination of paper tests and examinations done in-house and outsourced for chemical data; as well as a literature review on papermaking history and chemistry, historical bleaching, sizing and resizing techniques, authenticity of museum objects, and historical copying techniques. How would my recommendations change if I couldn't prove this copy to be a real incunable and would the book merit enough associative value as a facsimile or forgery to justify preservation?

One of my colleagues first spotted a watermark of a dove, *la colomba*, on one of the brittle leaves. This discovery, documented on a light sheet, along with chain lines and

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Insect and severe mold damage.

I could compare type composition from letter to letter, word to word, line to line for one entire leaf. They all matched.

laid lines I had already seen through the same illumination, gave me something to compare with other copies. The copy at Yale University had exactly the same watermark within its pages, which were in very good condition. In fact, the paper was in very good condition in every library I contacted with the same imprint, including the Free Library of Philadelphia, the Walters Art Museum in Baltimore, Maryland, University of California at Berkeley and the University of Glasgow. Of the 37 copies listed in ISTC, 31 are held in libraries outside of the United States with 13 of those copies in Italy. Librarians and conservators all took the time to describe the binding, write up a general condition overview, provide provenance for their institution's holding or send me an image of one of the only pages I could easily access: the



Embrittled paper.

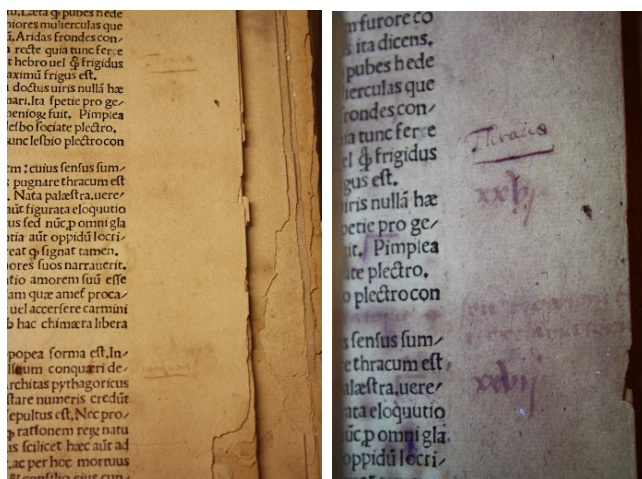
first extant page in Brown's copy, f Aii. With two images from two different copies to scale and Brown's copy in front of me, I could compare type composition from letter to letter, word to word, line to line for one entire leaf. They all matched.

An outsourced lignin test read negative (supporting authenticity) and an XRF reading (also outsourced) required a more long-term follow through. With so many shards of paper, I decided to perform whatever available, low cost, in-house, destructive, "scientific-enough" tests that could provide me any new

information. I wetted out and weighted down surface test strips on some paper shards and compared them with readings from a control (deionized water) and from Ruscombe Mill's conservation paper. I used both Colorphast® indicator litmus strips as well as commercial strips used for testing swimming pool water. In addition to pH, the swimming pool strips indicated water hardness (expressed as CaCO_3), chlorine, free chlorine, pH and total alkalinity. The pH readings tested consistently low, between 2–3 on *Opera* and consistently higher on the Ruscombe Mill scraps, 6–7. Although I expected these results, they allowed me to examine information from the other readings without presumptions.

Opera had been washed, most likely bleached, possibly resized and rebound before it came to Brown and before Foster's 1928 purchase from the bookseller, probably to rid the copy of marginalia typically disliked by collectors. Analysis of the paper shows that it was exposed to extreme chemical hardness conditions (1000ppm readings from the pool test strips) with water as the medium. Theories concerning those hard water conditions from my literature review indicated possible chemical additions to direct application or immersion bath treatments (bleach, buffers, sizing agents) or even natural hard water washing (with high levels of calcium or magnesium carbonate). Another suggestion of potassium permanganate (KMnO_4), a reductive bleach in existence since the 17th century and in use as a paper bleach since the early 20th century, came from a scientist with personal knowledge of book dealers and their practices. He went on to propose a way that pigment colors may be revived if a test for manganese came out positive. The hard water reading from the pool test strips supports the presence of magnesium on the paper surface.

Without conclusive, scientific data about this paper, I am reluctant to pursue any invasive treatments. I have recommended imaging each fractured leaf for digital access



Without illumination.

With UVA illumination.

and imaging with the aid of UVA to capture washed-out notations and marginalia. Examinations under this lighting revealed at least two hands on one test leaf with the possibility of more throughout. Improving the housing means upgrading materials and overall protection. Although made of acidic board, I felt the open faced tray succeeded as housing on one level. It exposed the book's fragility, indicating that the item could not be held or shelved upright and that it must be transported and accessed with care. I will enclose a new tray made out of alkaline buffered or possibly MicroChamber materials with a transparent lid so the same cautionary signals are communicated. Notes will be added to the housing and the catalog record, indicating condition and parameters for use.

Further questions and research will continue to explore possible explanations for the seriously degraded condition of this item. For now, I have satisfied my objectives for an initially overwhelming project: the copy is, by the available physical evidence, authentic and paper tests and research produced enough plausible possibilities to know that upgraded housing and reformatting are the simplest and most effective conservation efforts at this time. Along with being available to scholars, this particular edition of *Opera* can be used as a teaching tool for conservators that addresses

such topics as materials knowledge, historical practices, treatment decisions, knowing your limitations and engaging your community. I am greatly indebted to the conservators, historians, librarians and scientists who shared information, ideas, impressions and complimentary lab work for this project.

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