Dr. Rosie Grayburn
SRAL Lab Manager

Dr. Melissa Tedone
Head, Library Lab

Emily Guthrie
Library Director

Layla Huff
Intern

Sara Leonowitz
Intern

Meghan Abercrombie
Intern

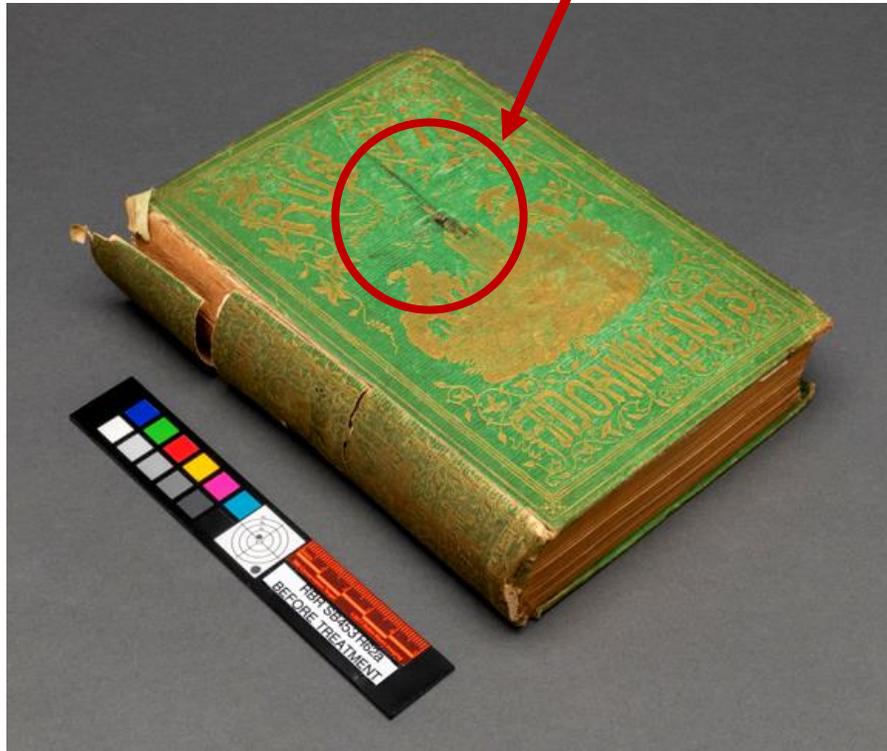Philip De Paola
Intern

Poison Book Project

WINTERTHUR MUSEUM, GARDEN & LIBRARY

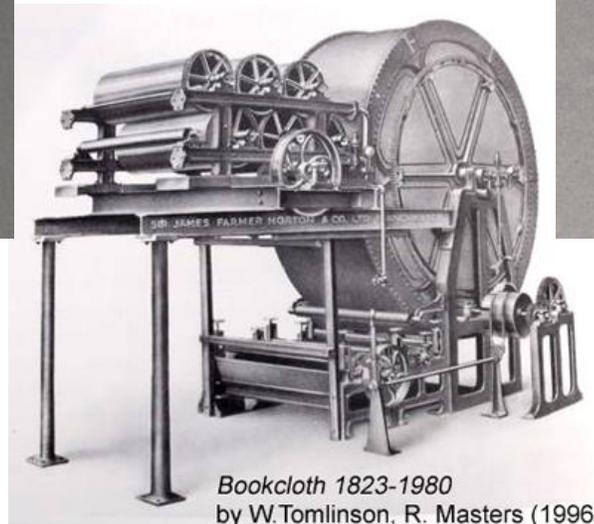Analytical survey of pigments used to color Victorian-era book cloth

Evidence of friability

Victorian-era Cloth Case Publisher's Bindings

Rustic Adornments for Homes of Taste
(London: Groombridge & Sons, 1857)

The Fern Garden
(London: Groombridge, 1872)

Bookcloth 1823-1980
by W. Tomlinson, R. Masters (1996)

Bookcloth colorant:
copper acetoarsenite (+ starch)
XRF analysis confirmed with Raman Spectroscopy

Major elements present:
chromium, lead
XRF analysis

Safety First: Surveying the Circulating Collection
English-language, cloth-case bindings published 1837–1900 (Victorian Era)

XRF Testing
for elemental ID

Raman Spectroscopy
to confirm
pigments of concern

Photographic
documentation
of book covers

Preliminary Results & Interim Safety Protocols

~250 books tested (to date) from
~one third of the circulating collection

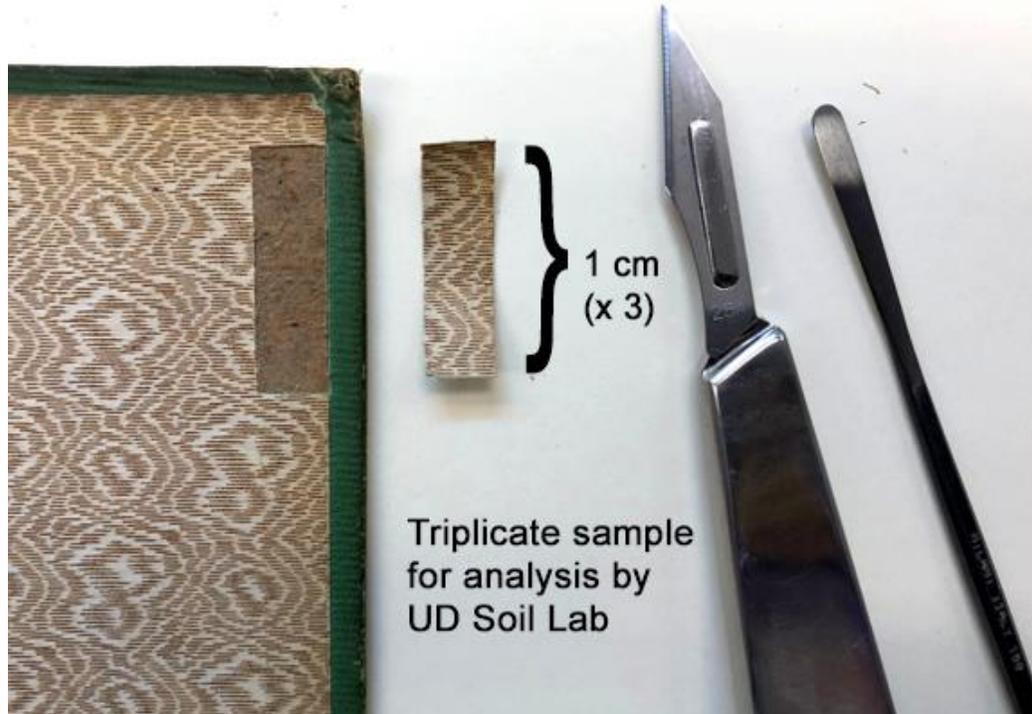| Tested Items	Elements detected
40%	Iron-based pigments
38%	Lead-based pigments
22%	Zinc-based pigments
2%	Barium-based pigments
2 items	Chromium-based pigments
1 item	Mercury-based pigment
1 item	Copper acetoarsenite ("emerald green")

For potentially toxic books:

- Move to Rare Books collection
- Rehouse in CoLibri cover (4.7 mil polyethylene)
- Label book with safe handling recommendations
- Add safe handling recommendations to catalog record

Continuing Research & Next Steps

For questions & project updates, please contact Melissa Tedone, mtedone@winterthur.org

1 cm
(x 3)

Triplicate sample
for analysis by
UD Soil Lab

1. Quantitative analysis of arsenic present in *Rustic Adornments* by University of Delaware Soil Lab

2. XRF survey of Winterthur Rare Books Collection

3. Increase survey sample size through collaboration with The Library Company

4. Open-access database for sharing results of analysis