Discover – Explore - Connect

Engaging with the Environment through Historical Records in the Natural Sciences

A Literacy & Engagement with Historical Records project funded by the National Historical Publications and Records Commission
Goals

• Make primary sources in the sciences accessible
• Create a model for teaching with primary sources in middle school and high school science classrooms
• Improve digital literacy
• Get outside!
Roots: Middle School Students Meet the Archives

• Introduction to primary sources from the Museum Archives
• Hands-on exploration of historical records
Arthur B. Williams, Naturalist, Educator
Following in the footsteps of A.B. Williams
Following in the footsteps of A.B. Williams
Growing the Trees: NHPRC Grant

• Funding period: July 2016 – June 2018

• Objectives:
  • Digitize Arthur B. Williams Collection from Museum Archives and make material freely accessible
  • Create curriculum
  • Teach the teachers
  • Create an advisory panel of archivists and teachers to assist with product development and implementation
Digitization

• Collection includes field notes, maps, zoological data, scrapbooks, photos, manuscripts
• Baldwin Wallace is the digitization partner for project
• Material is scanned at BW
• Stored on OCLC CONTENTdm
• Public access via LibGuides
Technical Details

• Resolution: 600 dpi
• 16-bit grayscale
• Fragile materials scanned manually; sturdy materials scanned using feeder
• Documents saved as multi-page PDFs; stitched together and OCR’d using Adobe Acrobat CC
• Uploaded to CONTENTdm
• Items tagged using controlled vocabulary from Library of Congress Authorities
Curriculum: Experiential Learning

- Hands on experience for BW students
- Proper techniques for digitization
- Metadata creation
- Quality control of curated content
- Marketable post-grad skill sets
Curriculum: Teaching with Primary Sources

- Teacher Institute to be held December 2, 2017
- What is a primary source?
- How to find primary sources in the sciences
- Using the Discover – Explore – Connect online repository
- Keeping field journals
Curriculum: In the Field

- Walking in the footsteps of early naturalists
- Orienteering: using maps, compasses, binoculars
- Gathering data
- Comparing data
Digital Literacy

• Collaboration with University of Akron, Dept. of Geosciences

• PDF → GIS map

• Georeference the scanned PDF by aligning it with existing elevation and hydrography data

• Once aligned, a copy is created that can be used with other data in GIS

• Error is +/- 50 ft
GIS map ➔ Point dataset

• Create datasets of points to represent observations
• Add attributes to those points
• Point datasets are useful for cartographic and analytical applications
Sustaining the Forest: Future Collaborative Projects
Collaborative Benefits

- Expertise
- Intellectual synergy
- Fresh perspectives
- Symbiotic relationship
- Increased likelihood of funding

- Equipment
- Software
- Additional workforce
- Increased visibility
- Additional audiences
Questions?

Wendy Wasman, Librarian & Archivist
Cleveland Museum of Natural History
wwasman@cmnh.org

Kieth A. Peppers, Archivist & Prof of Public History
Baldwin Wallace University
kpeppers@bw.edu