The Modern Library:
Digitizing historic photographs and field records of the United States Geological Survey

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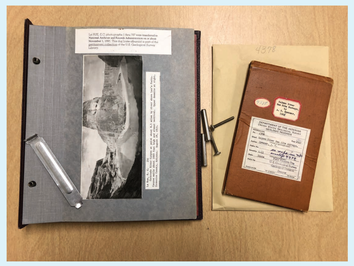
Introduction

The United States Geological Survey (USGS) Library is the largest earth science library in the world, maintaining more than 500,000 photographs taken from 1868 to present day of the United States and its territories. We contributed to the digitization effort by scanning four collections from USGS scientists: E.C. La Rue, J.O. Kilmartin, D.L. Peck, and W. G. Hoyt. We scanned, applied metadata, and uploaded the collections to a trusted repository platform, ScienceBase. The goal of digitizing these materials is to create a modern library by preserving and making unique information assets accessible. From this, virtual collections are generated for researchers and the public to use. The information we uploaded will be used to support scientific projects like repeat photography that show changes in riparian vegetation, or document changes in sediment.

Process

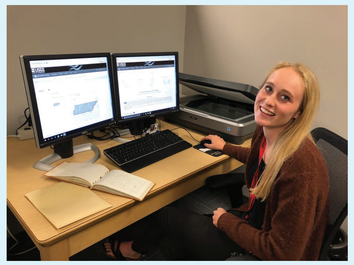
Step 1:

Selected materials were provided from special collections: photo prints, negatives, color transparencies, maps, and field notebooks.



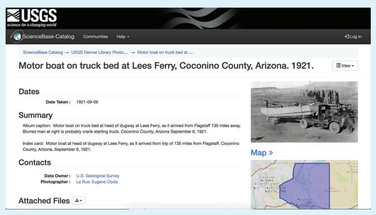
Step 2:

Prepared materials for scanning by removing original materials from archival storage and unbinding albums.



Step 3:

Selected the appropriate scanner: Contex XD2490, Konica Minolta PS5000mk II, EPSON Expression 10000 XL and selected scanning settings for the materials. *Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.*



Step 4:

Scanned a JPEG and a high-resolution archival scan (TIFF) and then uploaded files to the USGS ScienceBase repository. Created metadata with descriptive information including: title, scientist or photographer, date, and the geospatial footprint.

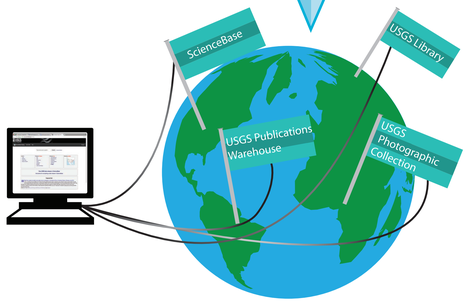
Step 5:

Linked scanned items to associated USGS publications and resources.
A quality control check was completed and then the materials were returned to their original housing.

Collections

Figure 1: The image above shows the four collections we scanned: Kilmartin, Peck, La Rue, and Hoyt (from left to right). These collections consisted of photo prints, negatives, color transparencies, maps, and field notebooks.

Reasons for Digitization



- More accessible, extending the library's reach to global audiences
- Provides more exposure to Unique and Special Collections
- Preservation of unique assets for future generations
- Modernize processes to better serve researchers
- Reduce the library's physical footprint

https://www.sciencebase.gov/catalog/ https://library.usgs.gov/ https://library.usgs.gov/photo/#/ https://pubs.er.usgs.gov/

Who uses ScienceBase

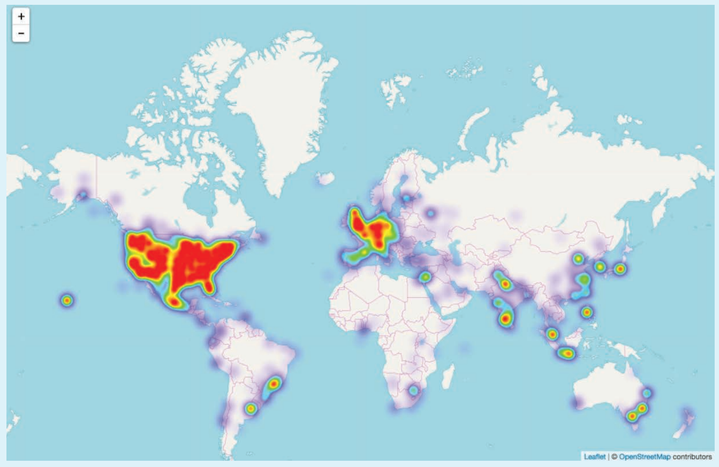


Figure 2: The heat map above shows ScienceBase users around the world. ScienceBase is used by USGS scientists, researchers, and staff, along with the greater scientific community and the general public. The main goal of ScienceBase is to assist researchers in answering fundamental questions by providing connections among people, locations, and data.

Practical Applications of ScienceBase

USGS Scientist Helen Fairley and Photographer Alan H. Fairley used repeat photography in 2017 (top photograph) to exactly replicate E.C. La Rue historic photography from 1923 (bottom photograph). This repeat photography was used to document changes in riparian vegetation along the Colorado River downstream of Glen Canyon Dam.

Acknowledgments

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