

# Supporting remote learning locally and nationally

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# Introduction

Lynne Grigsby, UCB, Division Head, Library IT



# Why eReserves?

- Course reserves has been a core Library function for many years
- Many students can't afford to buy all required materials
- Some required readings are not available for purchase (locally/globally)
- Course reserves provided a heavily used safety net:
  - available in 20+ campus libraries
  - 17,000 checkouts between July 1, 2019 and March 17, 2020 (shelter in place)

# The Process

1. Instructors provide lists of materials required for their courses.
2. Ereserves team searchers work with instructors - clarify citations, editions, translations, etc.
3. Identify content available online (review licenses, locate ebooks, etc.)
4. For items not already licensed and available online for unlimited number of users
  - a. License ebooks, when available and “affordable”
  - b. Page print item for scanning, if available, or order for scanning

# Who does all that work?

e-Reserves Team: Receives requests from faculty. Triage and determines next steps.

Acquisition Team: Receives ordering requests from e-Reserves team, orders the books via RUSH

Cataloging Team: Catalogs the print items and sends them to Digitization team

Paging Team: e-Reserves Team requests print items and the Paging Team pages and delivers to single location

Digitization Team: Digitizes items received from Paging Team and from Acq Team.

Library IT Team: Processes books digitized from the Digitization Team and submits to HathiTrust (and now UC BEARS)

Digitization Coordinators: Notifies faculty item is available and sends a link

# Ch-ch-ch-ch-changes

On August 25, 2021, the first day of fall instruction, the libraries reopened and HathiTrust Emergency Temporary Access Service (HT ETAS) was ended.

UCB developed a local Controlled Digital Lending platform the UC BEARS (UC Berkeley Electronic and Accessible Reserves System) which launched the same day

There are 751 items available for check out and in the first 2 months those items have been loaned over 6,500 times.

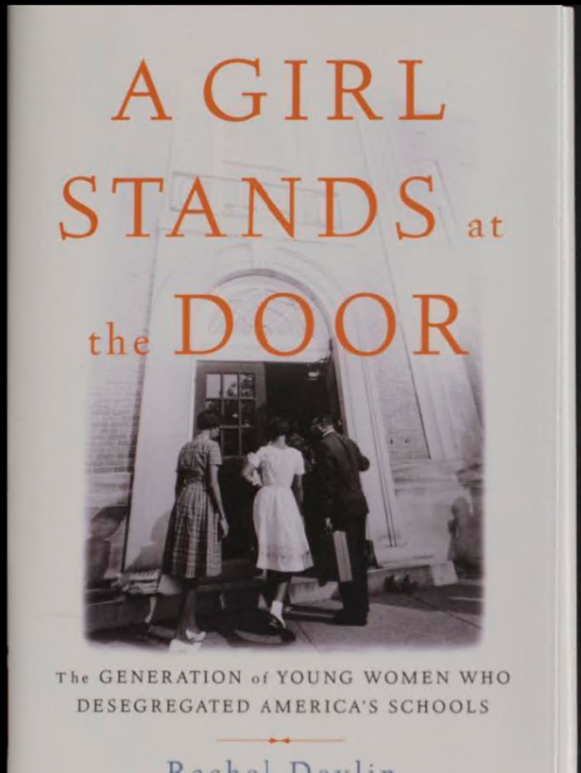
UC BEARS (UC Berkeley Electronic and Accessible Reserves System)

A girl stands at the door : the generation of young women who desegregated America's schools

**TRANSCRIPT**

sled — 'W Et fam . The  
GENERATION of YOUNG  
WOMEN WHO  
DESEGREGATED AMERICA'S  
SCHOOLS Rachel Devlin

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A GIRL STANDS at the DOOR

THE GENERATION of YOUNG WOMEN WHO DESEGREGATED AMERICA'S SCHOOLS

Rachel Devlin

Page 1

Page 2

Page 3

Page 4

# Creating

Chrissy Huhn, UCB, Head, Library IT Imaging Services



# Logistics and Staffing

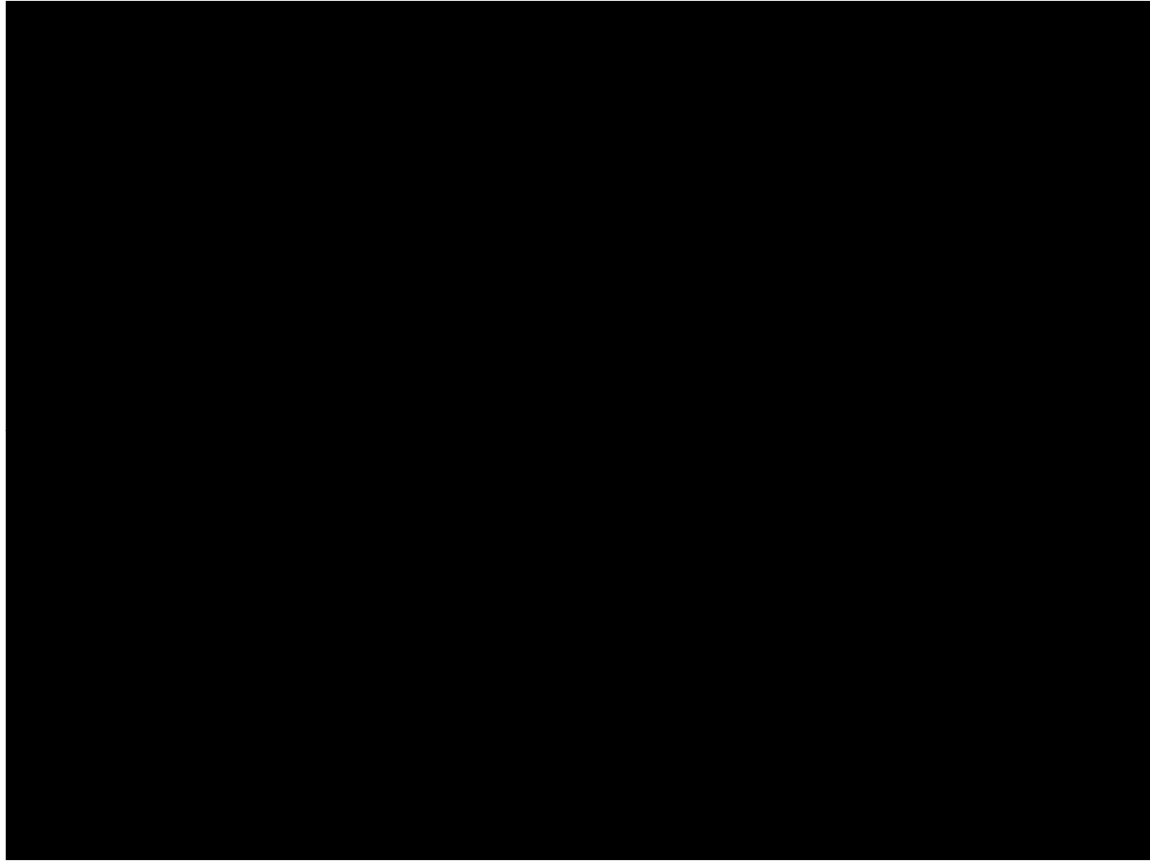
Doe Photo



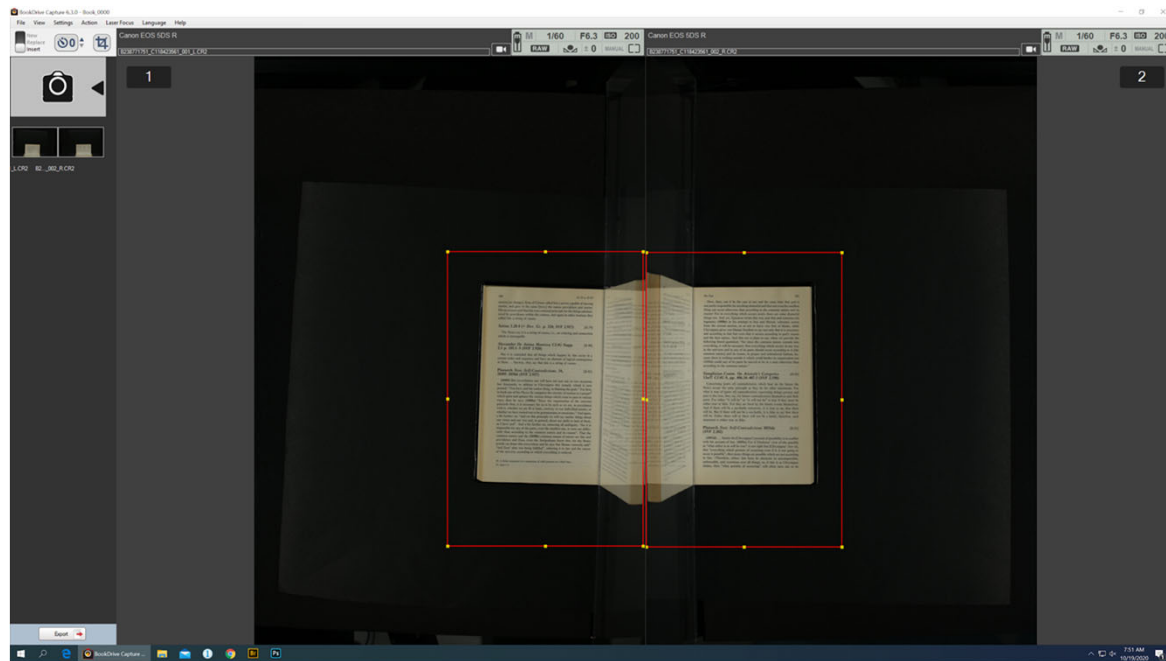
# Triage



# Scanning



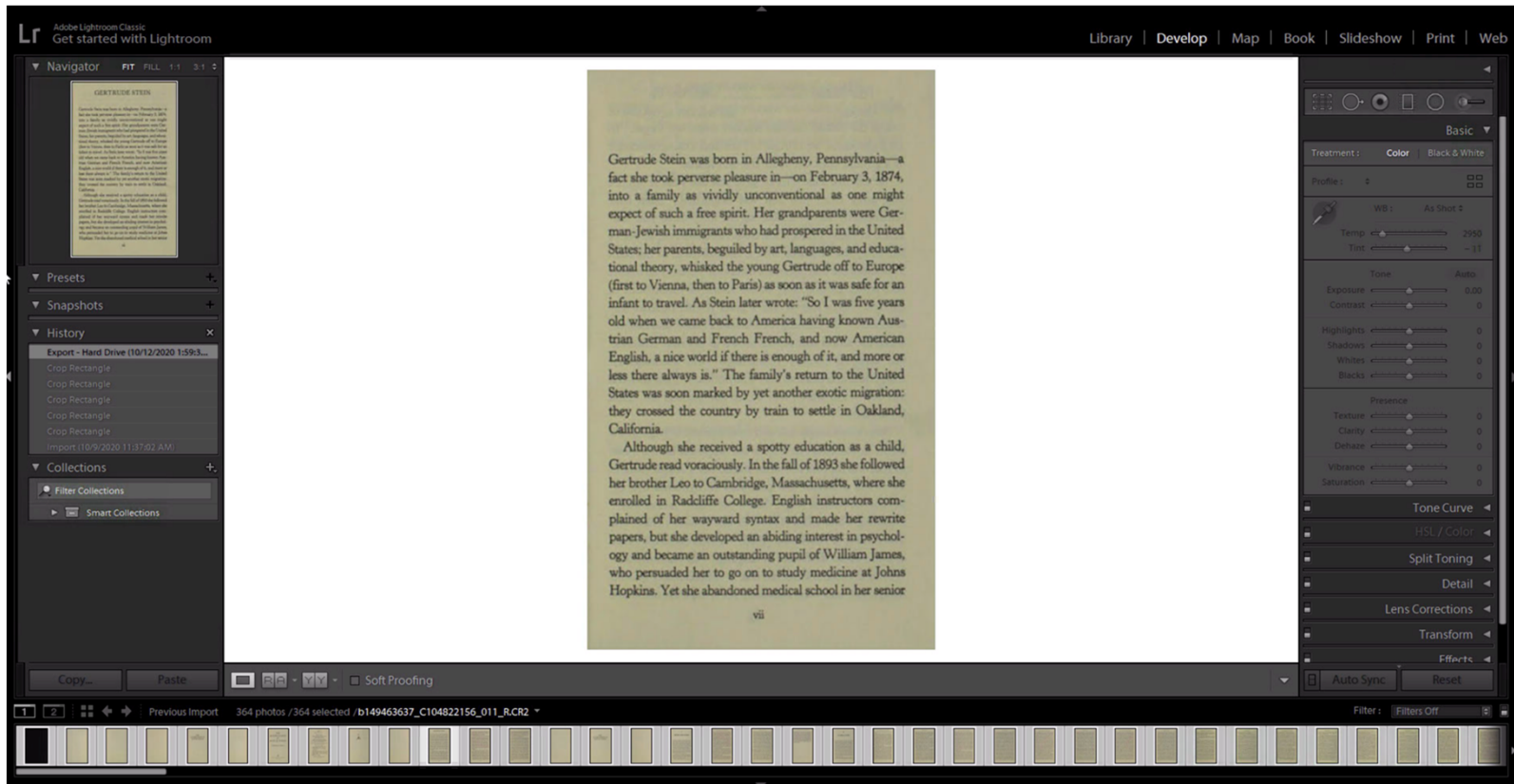
# Scanning



# Scanning



# Processing/QC



# Processing/QC

The screenshot displays the Adobe Bridge CS6 interface. The top menu bar includes 'File', 'Edit', 'View', 'Stacks', 'Label', 'Tools', 'Window', and 'Help'. The title bar shows the file path 'b122090822\_C060198267 - Adobe Bridge' and the system tray shows 'Sun 1:10 PM Christine'.

The main workspace is divided into two panels: 'CONTENT' on the left and 'PREVIEW' on the right. The 'CONTENT' panel shows a grid of 120 thumbnails, each labeled with a file name such as 'b122090822\_C0601...01\_R.tif'. The 'PREVIEW' panel displays a preview of the selected image, which is a page of text titled 'DESCRIPTION OF A STRUGGLE [19]'. The text in the preview window is as follows:

street, then at the Seminarkirche, then up at the sky. At last, at the sound of a carriage in one of the nearby streets, he remembered me: "Why don't you say something, my friend? Do you feel sick? Why don't you get up? Shall I look for a cab? If you like, I'll get you some wine from the tavern. In any case, you mustn't lie here in the cold. Besides, we wanted to go up the Laurenzberg."

"Of course," said I, and got up on my own, but with great pain. I began to sway, and had to look severely at the statue of Karl IV to be sure of my position. However, even this would not have helped me had I not remembered that I was loved by a girl with a black velvet ribbon around her neck, if not passionately, at least faithfully. And it really was kind of the moon to shine on me, too, and out of modesty I was about to place myself under the arch of the tower bridge when it occurred to me that the moon, of course, shone on everything. So I happily spread out my arms in order fully to enjoy the moon. And by making swimming movements with my weary arms it was easy for me to advance without pain or difficulty. To think that I had never tried this before! My head lay in the cool air and it was my right knee that flew best; I praised it by patting it. And I remembered that once upon a time I didn't altogether like an acquaintance, who was probably still walking below me, and the only thing that pleased me about the whole business was that my memory was good enough to remember even a thing like that. But I couldn't afford to do much thinking, for I had to go on swimming to prevent myself from sinking too low. However, to avoid being told later that anyone could swim on the pavement and that it wasn't worth mentioning, I raised myself above the railing by increasing my speed and swam in circles around the statue of every saint I encountered. At the fifth—I was holding myself just above the footpath by imperceptible flappings—my acquaintance gripped my hand. There I stood once more on the pavement and felt a pain in my knee.

"I've always admired," said my acquaintance, clutching me with one hand and pointing with the other at the statue of St. Ludmila, "I've always admired the hands of this angel here to

The 'PREVIEW' panel also includes a 'METADATA' section at the bottom, showing 'f/6.3 1/60', '1612 x 2577', '6.36 MB', '375 ppi', 'Adobe RGB', and 'RGB'.



# Processing

Alvin Pollock, UCB, Developer, Library IT





# Berkeley's Hathi Trust Submissions

- Submission of locally digitized content began in 2016
- 33,000 items and over 6 million pages sent to date
- In 2019 we submitted over 5000 items and roughly 1 million pages totaling 24 TB - 35% more than in 2018
- Submissions occurred roughly twice per month
- For Ereserves submissions had to occur weekly

# Switching to Weekly Submissions

- We must distribute the labor among non-developer staff
- We must streamline the process
- We must make our program user-friendly
- We must make installation simple

# Image Validation

Moved to Imaging Services staff to prevent rejected submissions

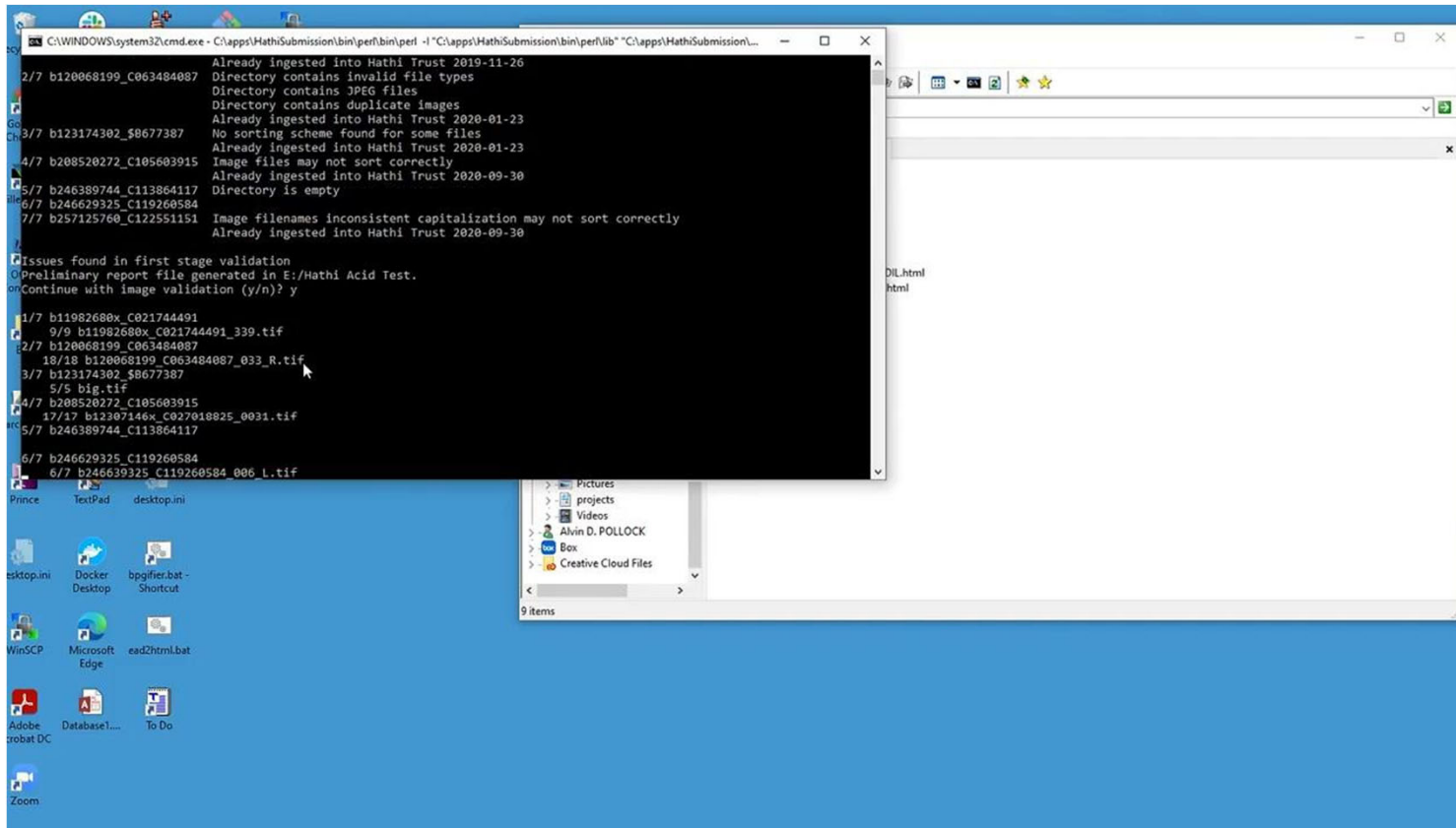
## Berkeley-Specific Checks

- Directory naming
- Proper file sorting
- Check if previously submitted
- Illegal file types (png, gif, etc.)
- Plus several others ...

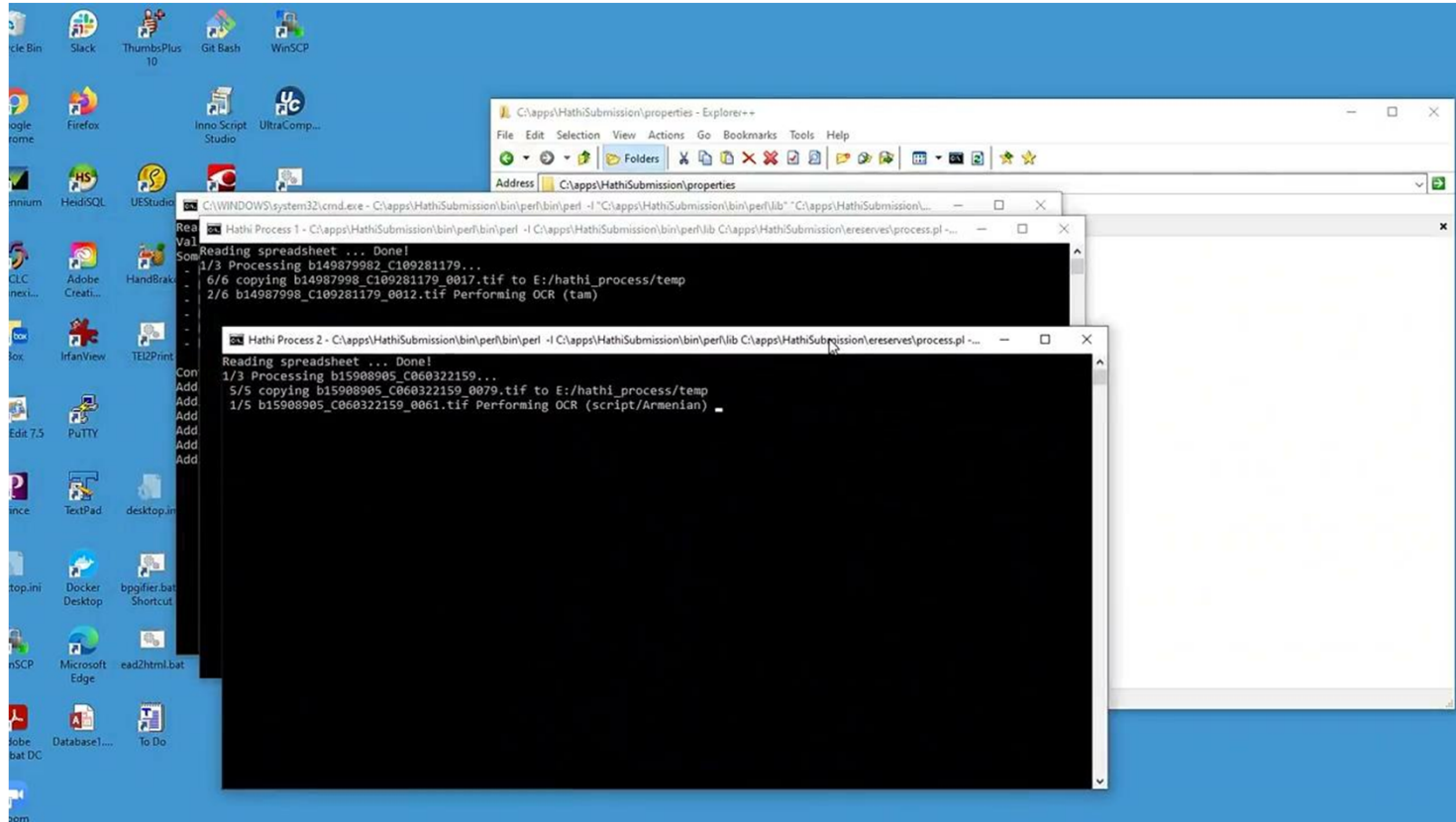
## Hathi Image Requirements

- Resolution
- Compression
- Bit depth
- Alpha channel
- Image corruption
- Plus several others ...

# The Validator



# Processing






# Publishing

Paul Fogel, CDL, Service Manager, Google Books & Content Digitization



### Filter your search

#### Current Filters

Original Location: University of California 

[Clear filters](#)

#### Item Visibility

- All Items 4,571,400
- Full View 1,344,720

#### Subject

- United States 103,571
- Dissertations, Academic 64,667
- China 58,769
- Agriculture 58,155
- Japan 52,410

[Show all 30 Subject Filters](#)

#### Author

Search results from the full-text of all works in HathiTrust.

1 to 20 of 4,571,400 Full-Text results

Items per page 20 

Select all on page

Choose collection

New collection... 

Add




#### Mahātmā Gāndhī yāñce saṅkalita vāñmaya. v.17

Published 1964

Author Gandhi, Mahatma, 1869-1948.

 [Catalog Record](#)

 [Limited \(search-only\)](#)



#### La composition enseignée par l'exemple : narration, portrait et parallèle, dialogue et discours, dissertation, lettre.

Published 1900

Author Chanal, Edouard, 1844-

 [Catalog Record](#)

 [Full View](#)



#### Jean-Marie Vianney, Curé d'Ars : sa pensée, son cœur / présentés

## Getting Content Into HathiTrust

### Purpose

Members may deposit digitized materials with HathiTrust for long-term preservation and access. These materials are stored in our repository and made available for search, display, and computational research, in addition to other uses as permitted by U.S. Copyright Law. We encourage all members to deposit material.

HathiTrust supports ingest of digitized books and book-like materials. These include manuscripts, pamphlets, and both bound and unbound serials. We cannot accept:

- unbound maps or other large-format items
- audio
- video
- items digitized from microform, film, or fiche
- born-digital materials, including PDFs and eBooks

Members wishing to deposit materials with HathiTrust may:

- work with one of our mass-digitization partners (currently Google and the Internet Archive), or
- work with us directly to establish a deposit workflow for locally-digitized materials

Note that HathiTrust does not offer digitization services. We can, however, provide guidelines and other support to members undertaking digitization projects.

### Ingest Overview

HathiTrust requires the following artifacts for each deposited item:

- Content: a zip archive (Submission Information Package, or SIP) containing page scans, OCR text, object metadata, and fixity information for each digitized item
- Bibliographic metadata: a MARC-compliant record describing the print version of the digitized item

There are separate processes for content and bibliographic metadata submission. For content submission, please email [feedback@issues.hathitrust.org](mailto:feedback@issues.hathitrust.org) for information. For bibliographic metadata submission, see [https://www.hathitrust.org/bib\\_data\\_submission](https://www.hathitrust.org/bib_data_submission).

In addition, we require the following two forms prior to deposit:

## Our Digital Library

[Emergency Temporary Service](#)

[Searching, Reading, Bu Collections, and Access](#)

[Technology, Standards, Specifications](#)

[Getting Content Into HathiTrust](#)

[Bibliographic Metadata Specifications](#)

[Bibliographic Rights Determination](#)

[Ingest Checklist](#)

[Ingest Reports](#)

[Ingest Reports Description](#)

[Bibliographic Metadata Submission](#)

[Ingest Tools](#)

[HathiTrust Metadata Management System](#)

[Data Availability and AI Policies](#)

[Statistics and Visualiza](#)

[HathiTrust Personas](#)



## Technical Requirements for Digitized Page Images Submitted to HathiTrust

### A Guide for HathiTrust Members

Version 1.1

February 10, 2021

Grateful acknowledgement is made to the Digital Conversion Unit, University Library, at the University of Michigan. This document is adapted from their excellent [instructions](#).

### INTRODUCTION

This document provides detailed instructions for members wishing to undertake new digitization projects for deposit with HathiTrust. Conformance with these guidelines ensures a consistent user experience across the HathiTrust Digital Library and facilitates ongoing collection management at scale.

Digitization is the first step in preparing content for deposit. Please see our website for information on other steps, such as creating [submission packages](#) (including structural and other metadata), [preparing](#) and [submitting](#) bibliographic records, and various [administrative requirements](#).

Note that this document provides guidelines for new digitization from print source materials only. For guidance regarding non-print (e.g., microform) or born-digital materials, please refer to the page [Getting Content Into HathiTrust](#).

For information on how to evaluate the degree to which already digitized content meets our requirements, please see our [Guidelines for Digital Object Deposit](#).

The following requirements are intended to support the creation of high quality image files for deposit with HathiTrust. Because HathiTrust serves both as a preservation repository and as an access node for digitized content, the images in our repository must match a set of technical characteristics in order to ensure format integrity and support services offered through the HathiTrust Digital Library. Items digitized to these standards meet established community best practices for both preservation and access. For more information on the HathiTrust commitment to long-term preservation of the materials in its care, please see our [Digital Preservation Policy](#).

# Workflow Overview

1. Digitization by Berkeley Imaging Lab; Creation of OCR; File Packaging (SIP); Hosting of ZIP files; Extraction of Bibliographic Metadata; Delivery to CDL
2. Loading of MARC Records into HathiTrust Metadata Management (Zephir)
  - a. lag between record loading & propagation throughout HT internal systems
  - b. >24 hours for report on loading status
3. Request for Download and Ingest of Files
  - a. Email Request to create ticket in HT Jira tool
  - b. Ingest is on a regular schedule; need for sufficient advance notice to queue materials for that week
  - c. Report on ingest status within 24 hours
  - d. Objects are "live" in HathiTrust within 48 hours of ingest

# Workflow Overview

- Ingest occurs on Wednesdays
- MARC Records need to be loaded by Monday latest
- Message requesting ingest attempt also needs delivery Monday, to insure objects are added to queue
- Delivery of materials to CDL for distribution by Monday morning, if not earlier



### UC Berkeley HathiTrust Submissions



UC Berkeley HathiTrust Submission:  
10/12/2021

☰ 1 2/6



UC Berkeley HathiTrust Submission:  
7/19/2021

☰ 2 4/6



UC Berkeley HathiTrust Submission:  
8/31/2020

👁 ☰ 3 1 4/6

### DONE UC Berkeley Local Submissions



UC Berkeley HathiTrust Submission:  
8/23/2021

☰ 2 6/6



UC Berkeley HathiTrust Submission:  
8/16/2021

☰ 1 6/6



UC Berkeley HathiTrust Submission:  
8/9/2021

☰ 1 6/6

### Updates to Berkeley Local Workflow



Submission Requirements



Automation of Submissions



+ Add a card



Berkeley

HathiTrust

Local Digitization



Join

Description

Edit

UC Berkeley Submission  
Email Date: 8/16/2021  
File Name: ucb-2\_20210816.xml  
Jira Ticket: HTS-147793

ark:/28722/h2028pt59  
ark:/28722/h22v2cq8z  
ark:/28722/h23n20v12  
ark:/28722/h23t9dm8n  
ark:/28722/h26d5pr7j  
ark:/28722/h26m33j2q  
ark:/28722/h27d2qn5t  
ark:/28722/h27m04f2z  
ark:/28722/h2b56dk19  
ark:/28722/h2bc3tb6g  
ark:/28722/h2c53ff9z  
ark:/28722/h2cc0v76q  
ark:/28722/h2fx74c54  
ark:/28722/h2g44j507  
ark:/28722/h2gx4583d  
ark:/28722/h2h12un8m

[Show full description.](#)

Tasks

Hide checked items

Delete

100%

- Submit Metadata file to Zephir
- Verify Successful Metadata Loading
- Triage any metadata loading issues
- Submit Object Ingest Request to Jira
- Verify Successful Object Ingest
- Triage any object ingest issues

ADD TO CARD

Members

Labels

Checklist

Dates

Attachment

Cover

Custom Fields

POWER-UPS

+ Add Power-Up

AUTOMATION

+ Add button

ACTIONS

Move

Copy

Make template

Watch

Archive

Share

## California natural history guides. no.56 (1992).

### About this Item

808 page scans

[Catalog Record](#)

[Text-Only View](#)

#### Rights

[Protected by copyright law.](#)

 Download 



 Search in This Text 

Open results in a new window

 Jump to Section 

 Get This Item 

 Collections 

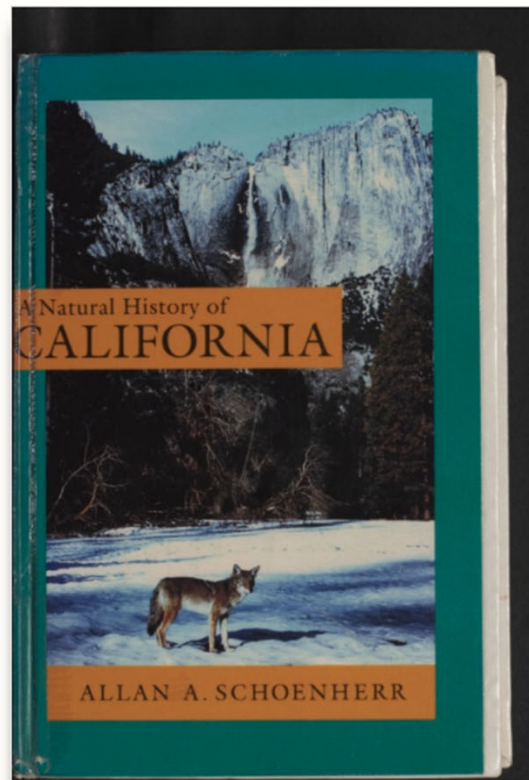
 Share 

Version

2021-08-13 23:03 UTC



#1



## California natural history guides. no.56 (1992).

### About this Item

808 page scans

[Catalog Record](#)

[Text-Only View](#)

### Rights

[Protected by copyright law.](#)

Download

Search in This Text

Open results in a new window

Jump to Section

Get This Item

Collections

Share

Version

2021.08.12.22.03.177

#38

22 BASIC ECOLOGY

(28.35 g) of milk chocolate has enough energy in it to raise the temperature of 147 liters (more than 25 gallons) of water 1°C.

The first law, loosely translated, states that the total amount of energy in the universe is constant, and we cannot add to it or take away from it. Perhaps even more loosely translated, the second law states that energy can be converted from one form to another, but transformations are never completely efficient. Disorder (entropy) tends to occur during energy transformations; therefore to create order or put things in a precise arrangement, requires more energy than can be reclaimed later. This is the reason that energy transfers in ecosystems (that is, from producers to consumers) are so inefficient. Nature tends to move toward randomness or disorder. If humans try to fight that tendency by putting things in order, we expend a great deal of energy that we can not reclaim. For example, planting crops in rows requires effort, and weeding them, which is fighting randomness, also requires effort. By the time the crop is harvested, processed, and transported to our homes, we have expended more total energy than we can hope to reclaim by eating the food. You can't break the laws of nature!

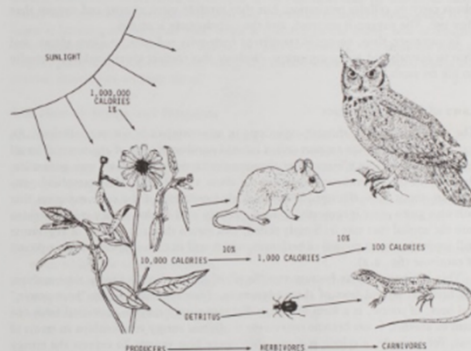


FIGURE 2.2 Transfer of energy in ecosystems. (Animal illustrations by Ellen Blonder, from J. Verner and A. S. Boss, *California Wildlife and Their Habitat: Western Sierr Nevada*, Gen. Tech. Rep. PSW-37, Berkeley: Pacific Southwest Range Exp. Stn., Forest Service, USDA, 1980. Plant illustration by Karlin Grunau Marsh.)

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Original from UNIVERSITY OF CALIFORNIA

#39

ECOSYSTEMS 23

### Food Pyramids

A food chain is the sequence by which energy is transferred from sunlight, to green plant, to herbivore, to carnivore. The total amount of energy that flows along a food chain in an ecosystem can be graphically depicted as a food pyramid, sometimes called an Eltonian pyramid after Charles Elton, an English ecologist. Food pyramids are simple applications of the laws of thermodynamics: In any given ecosystem, plants are more common than herbivores, and herbivores are more common than carnivores.

Pyramids can be based on three types of data: numbers of individuals, amount of energy, or total weight (biomass) (fig. 2.3). A pyramid of numbers is a simple expression of what a person sees on a walk in the forest. There are more plants than squirrels, and more squirrels than Coyotes. A more quantitative pyramid is based on energy. Given the efficiencies previously described, 100,000 calories of light will support 1000 calories of vegetation because photosynthesis is only 1% efficient. That vegetation in turn will support 100 calories of herbivores, which will support about 10 calories of carnivores. A biomass pyramid would show the same pattern, with

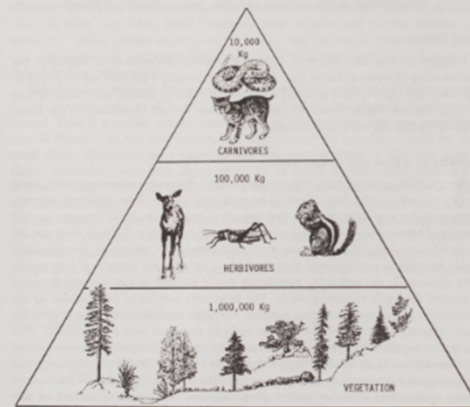


FIGURE 2.3 A pyramid of biomass. Energy flow is from bottom to top.

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Thank you. Questions?