



# Digitizing Specimens in the STAR Herbarium: A Viable Workflow for Collections Working with Limited Resources

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# What we Know

## Small herbaria:

- House important data
- Are less likely to digitize collections
  - Funding
  - Time
  - Other Responsibilities



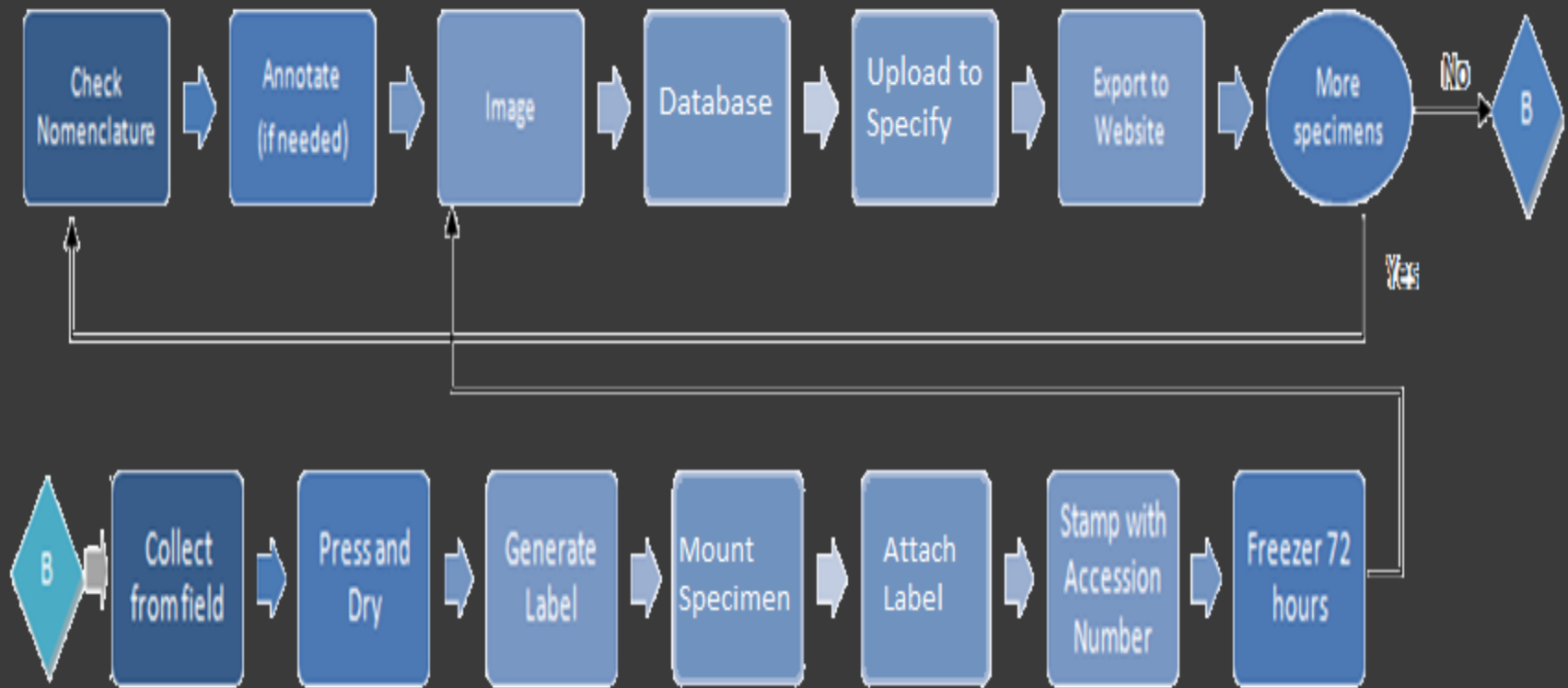
# Previous Presentations

How to circumvent these obstacles

- Options for student workers
- How much time to fully digitize



# STAR Herbarium Work Flow



# Previous Presentations

## Data

- Annotating: ~18,000 specimens
  - Rate ~ 150 specimens/hour
- Imaging: ~18,000 specimens
  - Rate ~ 143 images/hour



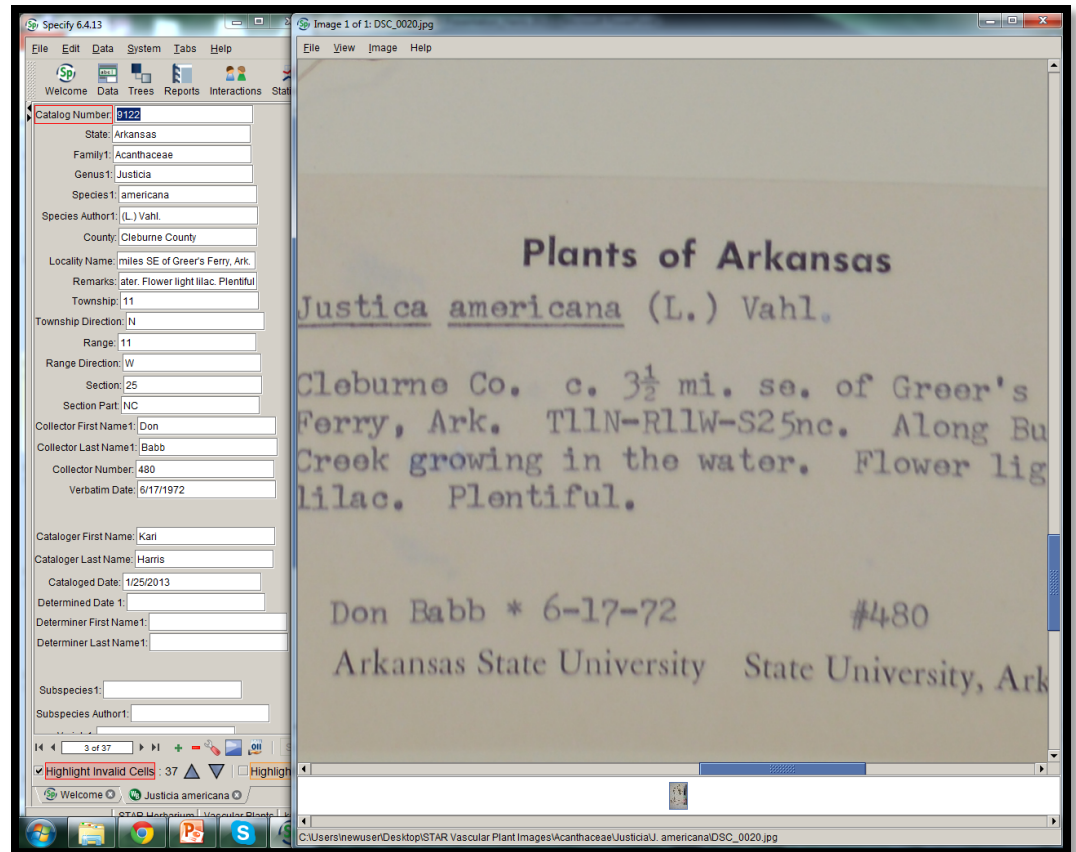
# Previous Presentations

## Data

- Uploading: ~18,000 specimens
  - Rate ~ 333 specimens/hour
  - Previous: ~ 7 minutes/ dataset
  - Updated because:
    - STAR datasets are per species
    - Number of specimens in each set varies
    - Per specimen rate is more accurate

# Databasing the Collection

- Using Specify 6
- 5 Students, 1 Me



# Databasing the Collection

Specimens databased: 14,575

- Rate (5 students): ~ 24/hour
- Rate (Me): ~ 46/hour
  
- Why the difference?
  - Matter of motivation
  - Students paid by the hour



# So What Can We Do?

- Find a more motivated student
  - Or one that can type faster...
- Train them better
- Pay them differently
  - Different motivation
  - Pay per specimen
    - \$7.50/hour for 30 specimens = \$.25/specimen
    - 20 hours/week = 600 specimens/week

# Making Data Available

The screenshot shows a web browser window displaying the 'KU Fish Web Portal Demo'. The interface includes a search bar, a table of records, and a detailed view of a specimen.

Records	Images	Map	Cat #	Genus	Species	Locality Name
1	Q		32000	Abudefduf	sexfasciatus	Talai harbor, S side of Yadua Island
2	Q		31988	Abudefduf	sexfasciatus	Patch reef behind barrier reef off Suva Point
3	Q		32580	Acanthurus	lineatus	Barrier reef off Suva Point
4	Q		31991	Acanthurus	nigrofasciatus	Barrier reef off Suva Point north of Suva Point
5	Q		31885	Acanthurus	nigrofasciatus	Yagaga Island, reef to the East and South of Suva Point
6	Q		31901	Acanthurus	trioctegus	Makuluva Island off Suva Point
7	Q		31824	Amblyglyphidodon	aureus	Charybdis reef, NW of Rakiraki, Suva
8	Q		31909	Amblyglyphidodon	curacao	Barrier reef off Suva Point inside Suva Point
9	Q		31998	Amblyglyphidodon	curacao	Nananuli-i-cake Island, reef to the East and South of Suva Point
10	Q		31821	Amblyglyphidodon	curacao	Great Sea reef lagoon, S of Kia Island
11	Q			ipogon	decussatus	Nukulau Island off Suva Point
12	Q			ipogon	phalaena	Nukulau Island off Suva Point
13	Q			ipogon	chrysopterus	Charybdis reef, NW of Rakiraki, Suva
14	Q			ipogon	melanopus	Charybdis reef, NW of Rakiraki, Suva
15	Q			ipogon	melanopus	Patch reef behind barrier reef off Suva Point
16	Q			ipogon	aureus	Great Sea reef, SW of Kia Island
17	Q			ipogon	crassiceps	Pascoe reefs, 3rd reef West of Yadua Island
18	Q			ipogon	crassiceps	Barrier reef off Suva Point north of Suva Point
19	Q			ipogon	crassiceps	Barrier reef off Suva Point north of Suva Point
20	Q			ipogon	crassiceps	Nukulau Island off Suva Point
21	Q			ipogon	crassiceps	Barrier reef off Suva Point north of Suva Point
22	Q			ipogon	crassiceps	Yadua Island, south side of Suva Point
23	Q			ipogon	doryssa	Suva, South of "Fish Patch", south of Suva Point

The 'Detail' view for record 11 shows a specimen image of a fish and a preview of the specimen's data.

The screenshot shows the Symbiota website homepage. The header features the Symbiota logo and the tagline 'Promoting Bio-Collaboration'. The main menu includes links for Symbiota Home, Overview, Active Data Portals, Join Existing Portal, Establish New Portal, Support, Help Pages, and Contact Us. The Symbiota Introduction section discusses the need for collaborative efforts in building a network of databases and tools to aid in increasing our overall environmental comprehension.

The screenshot shows the North American Network of Small Herbaria website. The homepage features a large image of yellow flowers and the title 'North American Network of Small Herbaria'. The main content area includes a 'Plant of the Day' section with a photo of a plant and a 'What is this plant?' link. The website also provides information about the network's goals and how to join.

# Commitment, Original Projection:

- 1 person; 10 hours/week; 20,000 specimens:
  - 13 weeks to annotate
  - 13 weeks to image
  - 67 weeks to database
  - 5 weeks to upload
- Total: 98 weeks or ~ 2 years

# Commitment, Revised:

- 1 person; 10 hours/week; 20,000 specimens:
  - 13 weeks to annotate
  - 13 weeks to image
  - 83 weeks to database
  - 6 weeks to upload
- Total: 115 weeks or ~ 2.25 years

# And Remember This...

- It takes longer than you think
  - Always plan for extra time
  - Set goals to stay on track
- Digitizing is never finished
  - The important thing is to just get started
  - Partially digitized is better than not at all

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# Questions?

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