



Establishing a Field Station Digitization Program:  
**THE SAGEHEN EXPERIENCE**

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iDigBio/OBFS Digitization Workshop  
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beginnings



SCFS 37

# how to digitize (the Sagehen way)

The background of the slide features several dried, pressed plant specimens, likely from a herbarium. The plants are light brown and tan in color, showing stems, leaves, and a seed head. They are arranged vertically, with some stems extending from the bottom and others from the top, creating a naturalistic, textured backdrop for the text.

STEP ONE: identify what you have

- volunteer time
- access to a computer
- access to FileMaker Pro
- assortment of collections
- archival materials to housing for herbaria specimens
- cabinets in varying stages of functionality



**2044** insects

**1757** plants

**448** mammals

**158** birds

**~ 30** jars of assorted specimens preserved in formalin

# how to digitize (the Sagehen way)

STEP TWO: identify what you don't have

- imaging equipment (camera, scanner, copy stand, lights, color meter...)
- quality physical storage for mammals or birds
- replacement specimen housing of any sort
- funding for software
- existing accession, catalog, or inventory records

# how to digitize (the Sagehen way)

STEP THREE: decide which of the resources you lack are ones you can't live without

- now* →
- imaging equipment (camera, scanner, copy stand, lights, color meter...)

- quality physical storage for mammals or birds
  - replacement specimen housing of any sort
- ← *later*

- funding for software  
*never?*
- existing accession, catalog, or inventory records

← *I wish...*



# how to digitize (the Sagehen way)

STEP THREE: decide which of the resources you lack are ones you can't live without



# how to digitize (the Sagehen way)

STEP FOUR: start with the easy stuff

- transcribing specimen data into a spreadsheet
- photographing specimen labels
- organizing & inventorying the collections





# how to digitize (the Sagehen way)

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**2011**



acquired Index  
Herbariorum  
acronym



transcribed  
1016 specimen  
labels



imaged 1016  
specimens



published specimen  
records online via the  
Consortium of  
California Herbaria



# how to digitize (the Sagehen way)

STEP FIVE: accumulate new resources as the immediate need arises

- tools
- people
- operational knowledge



2011

acquired Index  
Herbariorum acronym

transcribed 1016  
specimen labels

imaged 1016  
specimens

published specimen records online via the  
Consortium of California Herbaria

2012

transcribed  
65 specimen  
labels

engaged  
new  
volunteers

harnessed the  
taxonomic expertise of  
visiting researchers to  
assess basic collection

visited the Jepson  
Herbarium and the  
Museum of Vertebrate  
Zoology at U.C. Berkeley

added 8 new species to the  
comprehensive Sagehen  
Basin plant inventory via  
herbarium specimens



# how to digitize (the Sagehen way)

STEP SIX: document your progress as you progress

- how many specimens have you curated to be ready for digitization?
- how many specimens have you digitized?
- digitized in what ways? (transcribed, imaged, georeferenced)
- where have you shared your digitized data?
- what new use of the field station have you noticed because of your newly digitized data?
- what non-quantitative stories should you remember about the success of your digitization project?

University of California  
Sagehen Creek Station

073

Gene M. Christman  
Sagehen Creek Station, 6400 ft, 3 mi. N  
+ Mill, Nevada Co., Calif.  
Many small ones 23 Oct. 1965

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of Vertebrate Zoology at U.C. Berkeley

added 8 new species to the comprehensive Sagehen  
Basin plant inventory via herbarium specimens

curated and imaged  
entire collection



mounted  
over 400  
specimens

attended small  
herbarium digitization  
workshop hosted by  
iDigBio



2013

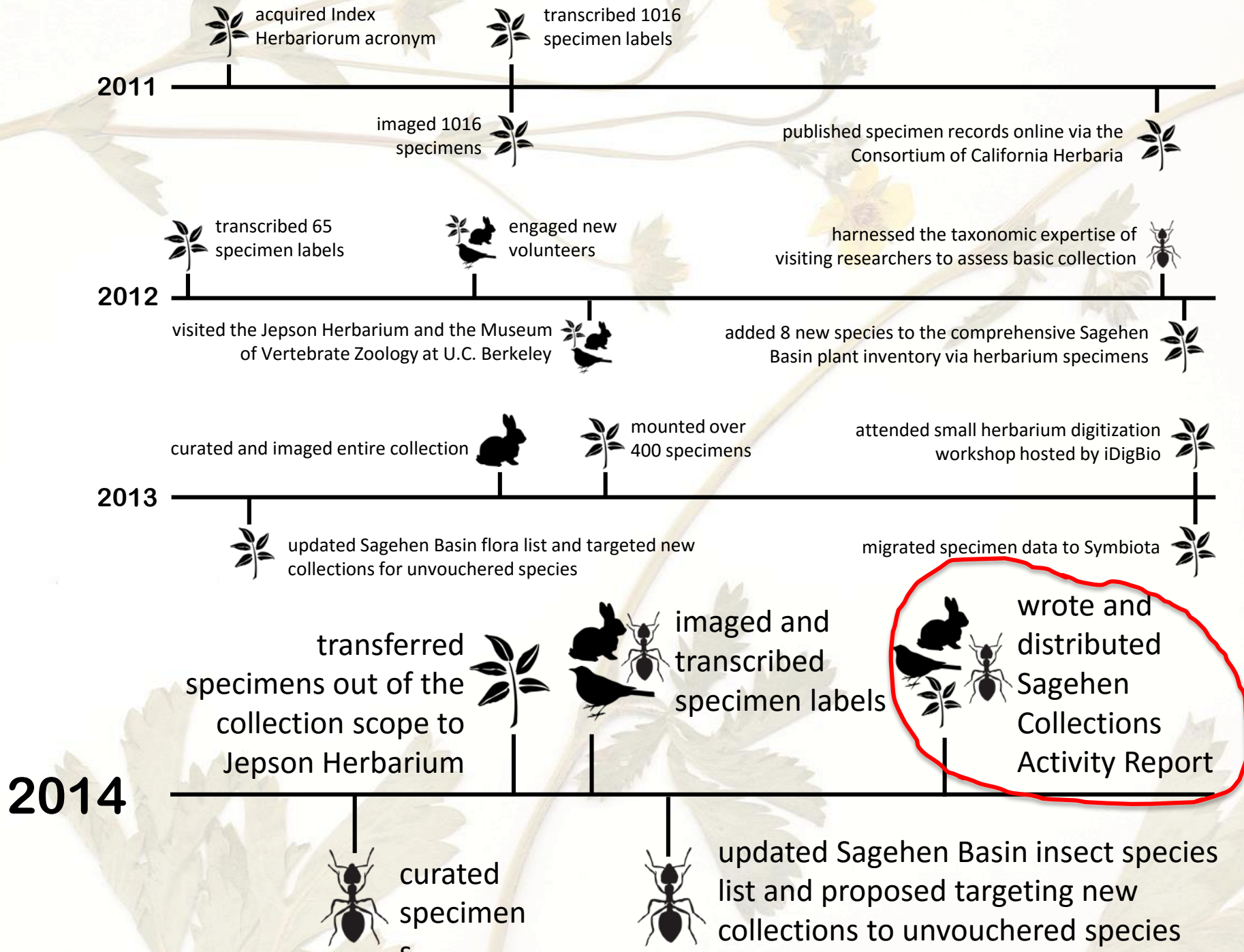


updated Sagehen Basin  
flora list and targeted  
new collections for  
unvouchered species

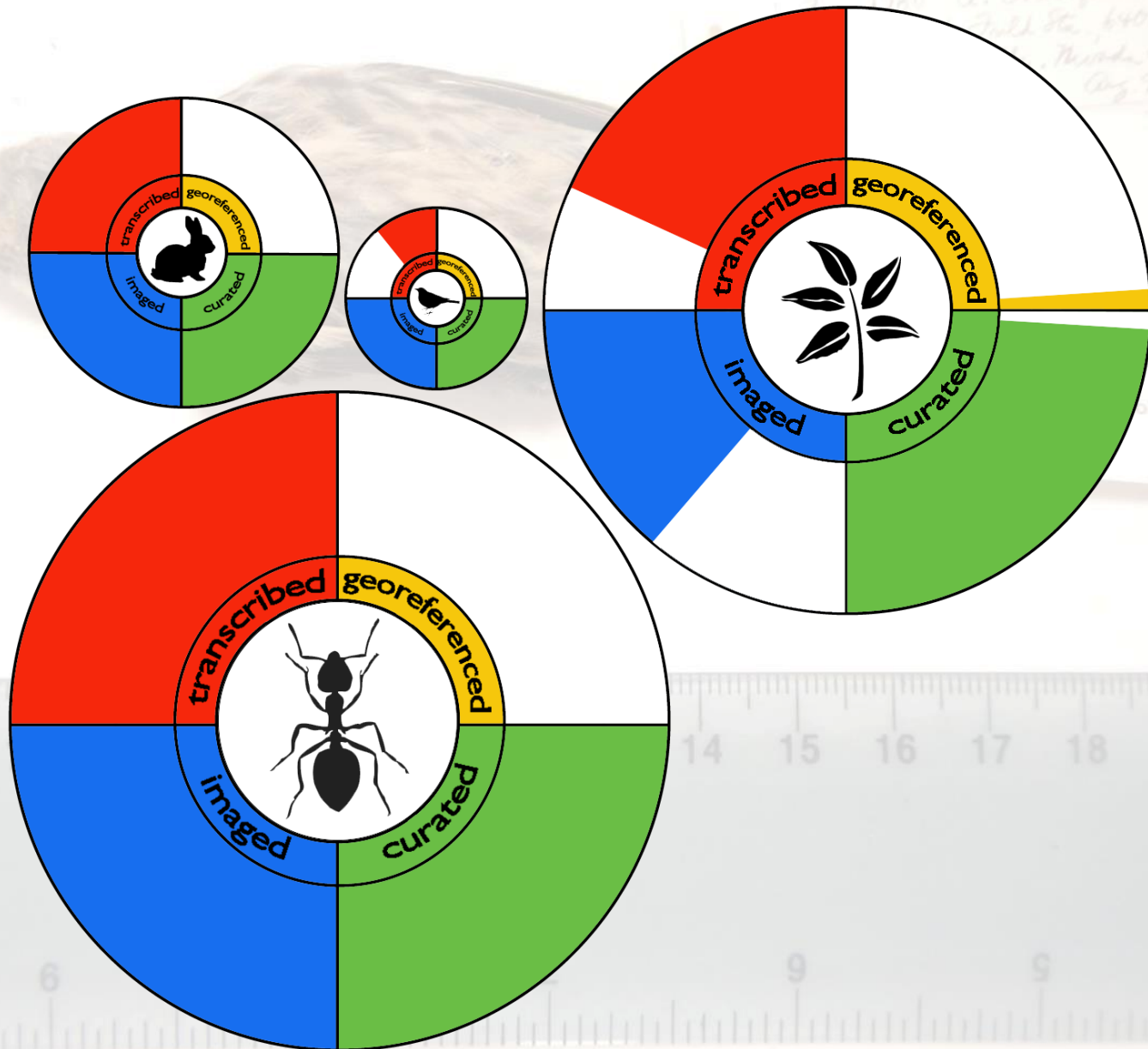
migrated specimen data  
to Symbiota







# current status of collections digitization



2011

- acquired Index Herbariorum acronym
- transcribed 1016 specimen labels
- imaged 1016 specimens
- published specimen records online via the Consortium of California Herbaria

2012

- transcribed 65 specimen labels
- engaged new volunteers
- visited the Jepson Herbarium and the Museum of Vertebrate Zoology at U.C. Berkeley
- added 8 new species to the comprehensive Sagehen Basin plant inventory via herbarium specimens
- harnessed the taxonomic expertise of visiting researchers to assess basic collection

2013

- curated and imaged entire collection
- mounted over 400 specimens
- attended small herbarium digitization workshop hosted by iDigBio
- updated Sagehen Basin flora list and targeted new collections for unvouchered species
- migrated specimen data to Symbiota

2014

- transferred specimens out of the collection scope to Jepson Herbarium
- imaged and transcribed specimen labels
- wrote and distributed Sagehen Collections Activity Report
- curated specimens
- updated Sagehen Basin insect species list and proposed targeting new collections to unvouchered species



**100**

Hours to **scan** and **transcribe** 1016 herbaria sheets

**0.5**

Hours to **publish data online** with the Consortium of California Herbaria

**32**

Hours to **photograph** 448 mammal specimens and their labels

**40**

Hours to **mount** over 400 specimens

**1**

Hours to **migrate** FileMaker database to Symbiota

# how to digitize (the Sagehen way)

STEP SEVEN: set lofty goals once you have a taste of the potential for digitized biodiversity data

**GOAL.** Attract research and facilities use by creating a resource-rich, multi-taxa reference collection for the Sagehen Basin.

**OBJECTIVE 1.** Finish digitizing all collections.

**OBJECTIVE 2.** Design and implement a digital asset management plan for digitized collections so that media is easily accessible for use.

**OBJECTIVE 3.** Aggregate data from other institutions' specimens that were collected in the Sagehen Basin.

**OBJECTIVE 4.** Develop secondary resources from internal and external digitized collections, e.g. the proposed Sagehen Basin Mammal Portal.

**OBJECTIVE 5.** Provide access to resources, such as digital collections and physical specimen loans, for local K-12 and visiting higher education groups.

**OBJECTIVE 6.** Continue to document basin flora and fauna through citizen science efforts in order to create distribution maps for future analysis.

# thank you!



questions, concerns, or general thoughts about doing more with less:

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