



IDIGBIO ORIENTATION WEBINAR SERIES

Resources for digitizing biodiversity collections and managing the digitized data

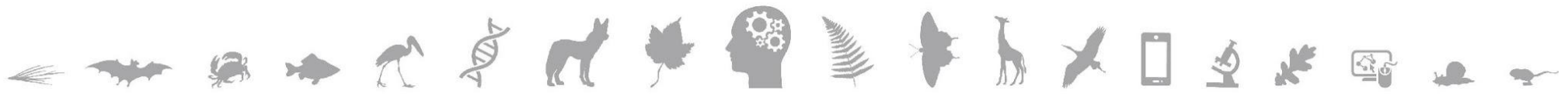
November 17, 2021

iDigBio Digitization, Workforce Development, and Citizen Science Domain

Austin Mast, Erica Krimmel

Symbiota Support Hub

Nico Franz, Jenn Yost, Laura Prado, Katie Pearson, Ed Gilbert



iDigBio Orientation Webinar Series

October 6 - Welcome to iDigBio Phase 3

October 20 - Ongoing iDigBio collaborations and events

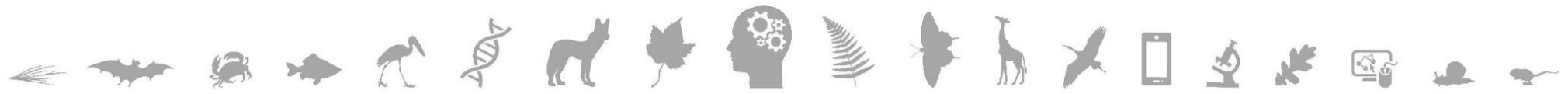
November 3 - Project management and data mobilization considerations for digitization networks

November 17 - Resources for digitizing biodiversity collections and managing the digitized data

December 1 - Increasing diversity and inclusion in biodiversity collections

December 15 - Accessing and using digitized data from biodiversity collections

<https://www.idigbio.org/content/idigbio-orientation-2021>



Agenda

- iDigBio resources for digitizing
- Symbiota Support Hub



iDigBio Digitization Academy

Formalizing opportunities for professional development in order to:

1. Create a set of complementary courses that are more than the sum of parts.
2. Provide predictable delivery of training.
3. Sustain systematic attention on evolving digitization protocols, best practices, and other relevant resources.



iDigBio Digitization Academy: Introduction to Biodiversity Specimen Digitization

12 hours synchronous contact + 8 hours asynchronous work

This free, online course is focused on **introducing the creation of digital data about biodiversity specimens to those who are just beginning this activity.**

This course is targeted at **those already associated with a biodiversity collection**, such as student technicians, collections management professionals, or curators. The course will be relevant to a diversity of collection types. **Participants do not need to have prior knowledge** of biodiversity informatics or specialized software.

Session One: July 12-15, 2021

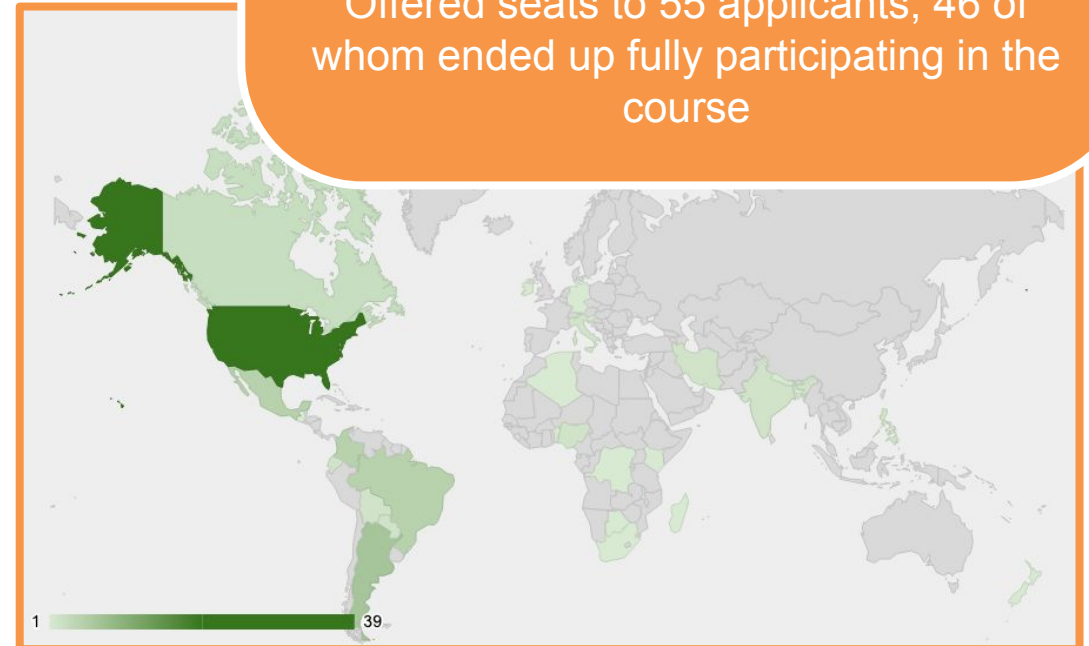
Session Two: August 9-12, 2021

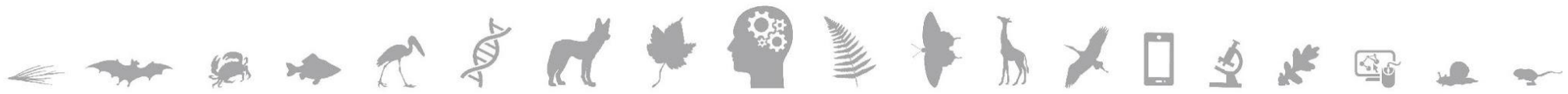
107 applications from 29 countries

Plurality of both received applications (36%) and accepted applications (55%) from the U.S.

82% of applicants new to iDigBio;
50% new to digitization

Offered seats to 55 applicants, 46 of whom ended up fully participating in the course





iDigBio Digitization Academy: Public Participation in Digitization of Biodiversity Collections

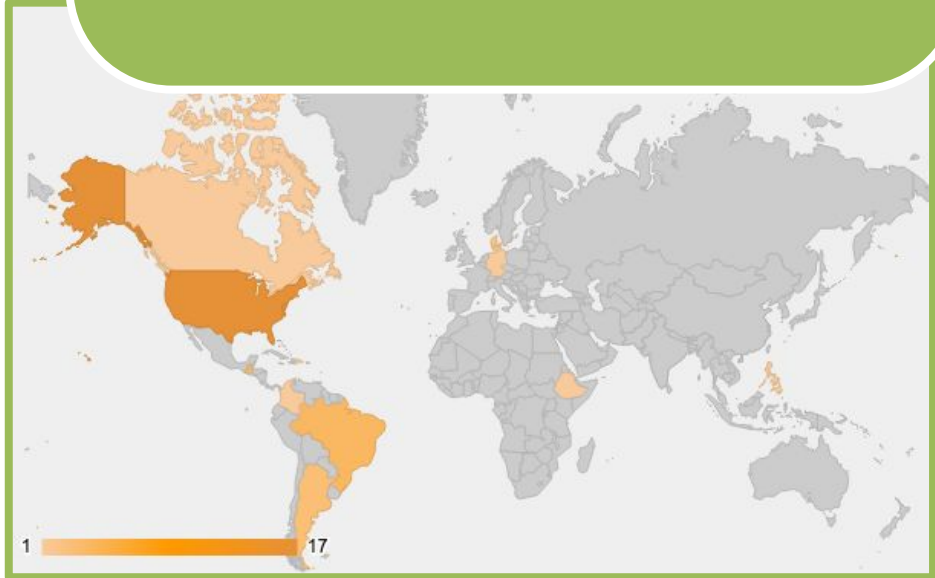
12 hours synchronous contact + 8 hours asynchronous work

This free, online course is focused on **public participation in science as it relates to digitization and research using biodiversity specimens**. Public participation in science is sometimes referred to as citizen science, community science, or crowdsourcing.

This course is targeted at **those already associated with a biodiversity collection**, such as student technicians, collections managers, curators, affiliated educators, or administrators. The course will be relevant to a diversity of collection types. **Participants do not need to have prior knowledge** of public participation in science, only a desire to use it as part of their future research or digitization activities.

Session One: December 6-9, 2021

37 applications from 12 countries
-
Plurality of applications (46%) from the U.S.
-
38% of applicants new to iDigBio
-
Offered seats to 23 applicants





iDigBio Digitization Academy

- Let us know if you have topics you want to see built into courses
- We are currently hiring a new person who will be lead on Digitization Academy, *more at <https://bit.ly/3Db0eLX> (review begins Nov. 21)*
- Still working on implementation of a cohesive package, e.g., how to share course materials more broadly with the community. For now, best place to find details is on the course announcements:
 - ◆ <https://www.idigbio.org/content/introduction-biodiversity-specimen-digitization>
 - ◆ <https://www.idigbio.org/content/public-participation-digitization-biodiversity-collections>



Additional resources for digitization strategies & workflows

- Hosted by iDigBio
 - ◆ Wiki (https://www.idigbio.org/wiki/index.php/Wiki_Home)
 - ◆ DROID workflow modules & task lists (<https://www.idigbio.org/content/workflow-modules-and-task-lists>)
 - ◆ Community on Slack (<https://bit.ly/Join-iDigBio-Slack>)
- Symbiota documentation (<https://symbiota.org/docs>)
- SPNHC Best Practices wiki (<https://spnhc.biowikifarm.net/wiki>)
- Discipline-based working groups
 - ◆ e.g., BugFlow (<https://entcollnet.github.io/BugFlow>)
 - ◆ e.g., Paleo Digitization Working Group (<https://bit.ly/paleo-digi>)
- Resources curated by Thematic Collections Networks
 - ◆ e.g., California Phenology (<https://www.capturingcaliforniasflowers.org>)
 - ◆ e.g., Terrestrial Parasite Tracker (<https://parasitetracker.org>)



Examples of additional tools related to digitization

data cleaning

data wrangling applications and coding languages, taxonomic authorities, etc.



OpenRefine



data standards & mobilization

standards e.g., Darwin Core, Audubon Core



GBIF INTEGRATED PUBLISHING TOOLKIT^(IPT)
free and open access to biodiversity data

Biodiversity
Information
Standards
T D W G

transcription

data entry applications, artificial intelligence methods (OCR, natural language processing), etc.



georeferencing

gazetteers, lookup services, georeferencing applications, etc.



Google Maps



Managing digitized data: Collections Management Systems

iDigBio hosts surveys containing a standard set of questions, which can be helpful for comparing options: <https://bit.ly/idigbio-cms>





Symbiota: an open-source software for managing and mobilizing biodiversity data



- **Content management system - live curation of specimen records by curators on a web browser**
- **Mobilizes data from any content management system into the digital data sphere**

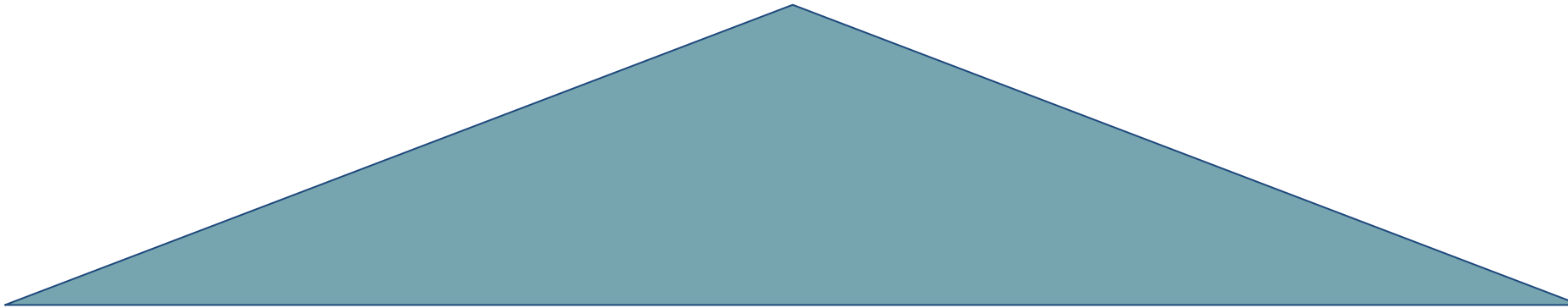


GBIF
Global Biodiversity
Information Facility

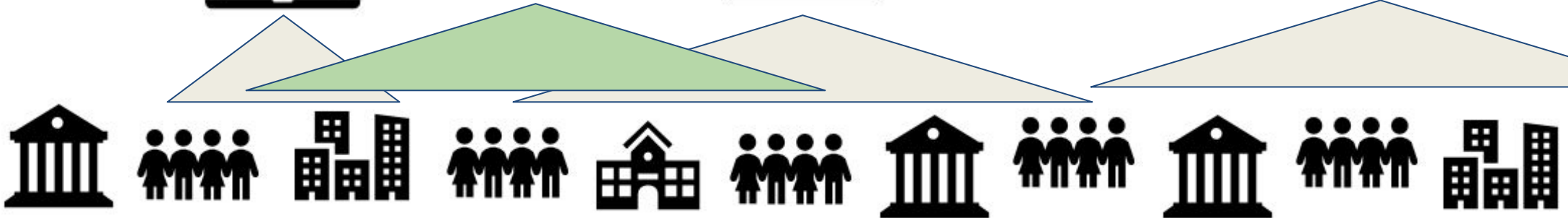


iDigBio
Integrated Digitized Biocollections

Aggregators



Portals:
Regional
Taxonomic
Aggregators



Collections

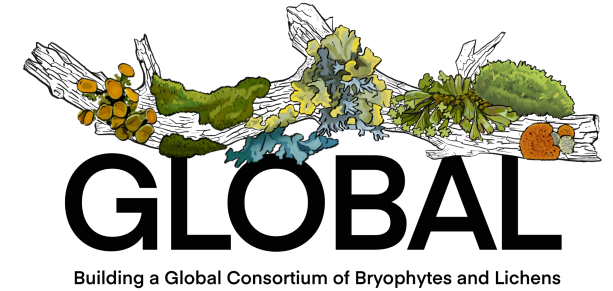


Mobilizing data: A series of data portals united around themes



Symbiota & TCNs

- Collaborative remote working space
 - Transcription, Note from Nature
 - Georeferencing
 - Duplicate matching
 - Imaging
- New Tools for proposed for efficient digitization
 - Georeferencing
 - Duplicate data harvesting
 - Trait scoring
- Cross-institution data curation



ASU Hosted

- Invertebase
- SEINet
- CCH2
- Fern Portal
- Madrean Discovery Expeditions (MDE)
- CPH
- Guatemala portal
- CNALH
- CNABH
- Gabon portal
- Neotropical plants
- SCAN
- NEON
- Ecdysis
- STRI
- Open Herbarium
- Tardigrade portal
- CSVColl
- CNH
- Bee Library

Public Symbiota Portals

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Public Symbiota Portals

University of Minnesota

- Minnesota Biodiversity Atlas

Santa Barbara Botanic Gardens

- Cal-IBIS

Oregon State University

- Oregon Flora

University of Illinois

- MycoPortal
- MiCC

Great Lakes Invasives Network

Cal Academy

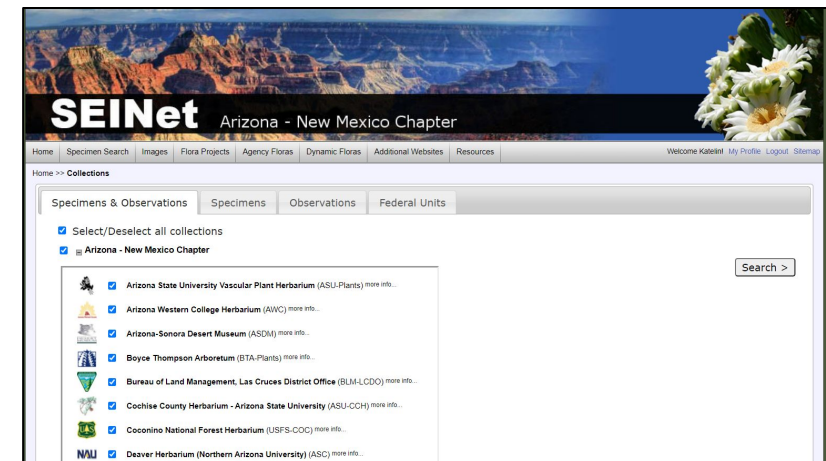
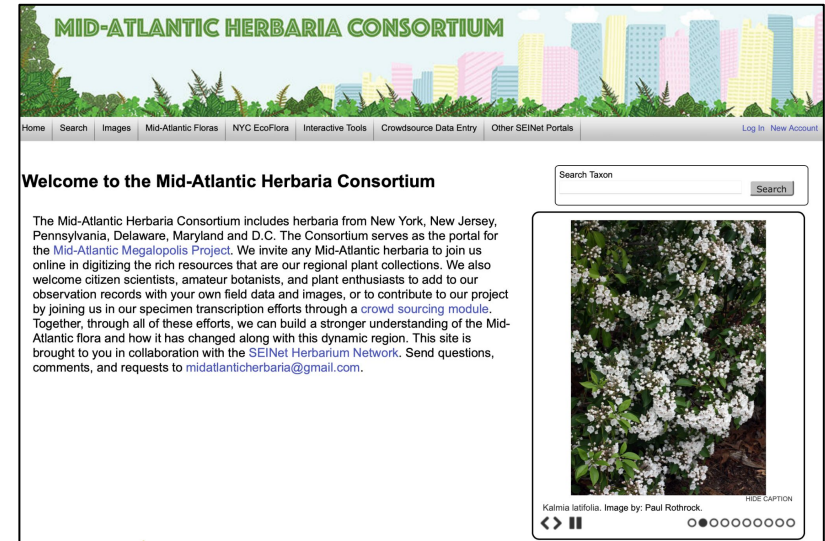
- Monarch (deprecated)

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- SEINet AZ-NM chapter
- SERNEC
- Consortium of Midwest Herbaria
- Mid-Atlantic Herbaria
- Northern Great Plains
- Noroeste de México
- NANSH
- vPlants
- TORCH
- Intermountain herbaria
- Southern Rockies

Frontends



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Frontends

- CNALH (North American)
- CHLAL (Latin American)

- Herbario Virtual Austral Americano
- COTRAM

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University of Minnesota

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Santa Barbara Botanic Gardens

- Cal-IBIS

Oregon State University

- Oregon Flora

University of Illinois

- MycoPortal
- MiCC

Great Lakes Invasives Network

Cal Academy

- Monarch (deprecated)



Open-Source Biodiversity Data Management Software

[GET SYMBIOTA HELP](#)

[VIEW THE CODE](#)

[CONTACT US](#)

A robust content management system and a tool for biodiversity data exploration.

1,400+

Biodiversity Collections

45

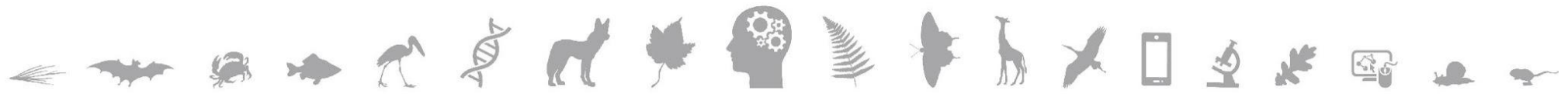
Symbiota Portals

9mi+

Images Published

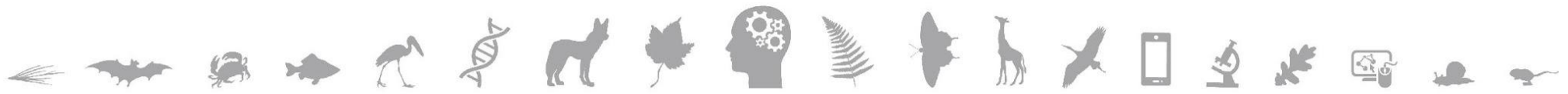
70mi+

Occurrences Published



Sym **biota**

Support Hub



What can the Symbiota Support Hub offer you?



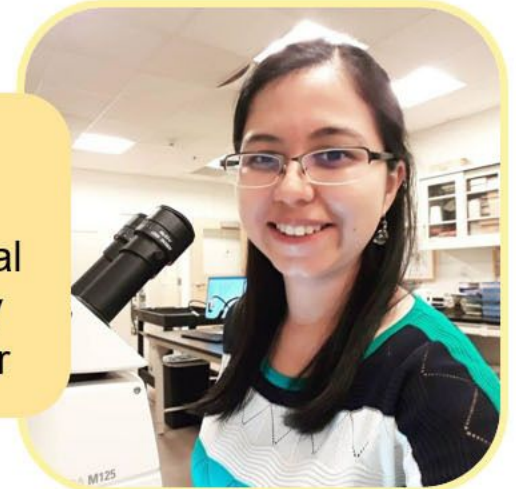
- Help
- Digitization workflow support
- Data mobilization through Symbiota portals
- Database management support
- Tool integration and development
- Data migration and back end tasks
- Data publishing to GBIF and iDigBio
- Assistance with image hosting



Dr. Jenn Yost
Community Lead



Katie Pearson
Data Manager



Samanta Orellana
International
Community
Coordinator



Ed Gilbert
IT Management
Lead



Dr. Nico Franz
Management @ASU



Dr. Laura Prado
Biodiversity
Informatician



Symbiota Support Hub Mission

- **Help Desk support** for portal data access, publication, sharing, and management.

symbiota@asu.edu



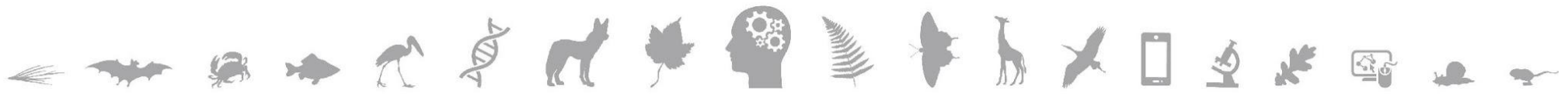
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- Hosting **webinars, trainings, and workshops** to improve community capacity.



Symbiota Support Hub Mission

- **Help Desk support** for portal data access, publication, sharing, and management.
- Scalable development, management, and dissemination of **documentation** for all categories of Symbiota users.
- Hosting **webinars, trainings, and workshops** to improve community capacity.
- Implementation of a **sustainable business plan** for Symbiota portal communities.



Open-Source
Biodiversity Data
Management Software

GET SYMBIOTA HELP

VIEW THE CODE

CONTACT US

symbiota.org/docs

symbiota.org

Symbiota Documentation

A growing archive of help files for one of the most popular Natural History content management systems

Try searching for terms here



Browse articles by subject



User Guide

Learn to access, view, and download data and checklists.



Editor Guide

Learn to edit, manage, import, and export data in Symbiota portals



Collection Manager Guide

Learn to clean data, edit permissions, upload data, and perform other administrator functions.

↻ Collection Manager Guide

- Data Cleaning
 - Compare Duplicate IDs Across Collections
 - Duplicate Catalog Numbers
 - Geography Cleaning Tools
 - Taxonomic Cleaning Tools
- Data Publishing
 - Publishing Data to iDigBio
 - Creating a Darwin Core Archive
 - Publishing Data to GBIF
- Images
 - Batch Uploading/Linking Images

Taxonomic Cleaning Tools

<https://symbiota.org/docs>

Info

This page describes how to use the two taxonomic cleaning tools in Symbiota portals. For more information about the taxonomic thesaurus, visit the [Taxonomy](#) page.

The taxonomic cleaning tools are great resources for cleaning up misspellings and other taxonomic name entries that do not link to names in the central taxonomic thesaurus. They are meant to aid in locating and fixing taxonomic errors and inconsistencies.

Analyze Taxonomic Names



The screenshot shows a video player interface. The video title is "Taxonomic Cleaning Tool in CCH2". The video content displays the CCH2 (California Phenology TCN) website. The website header includes the CCH2 logo and the text "Featuring Data From the California Phenology TCN". Below the header, there is a list of taxonomic entries with checkboxes and status indicators. A large play button is overlaid on the video content.




Symbiota Docs on GitHub

BioKIC / **symbiota-docs** Public Unwatch 6 Star 0 Fork 0

[Code](#) [Issues 12](#) [Pull requests](#) [Discussions](#) [Actions](#) [Projects 2](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)


General

Welcome to symbiota-docs Discussions!

 arbolitoloco

Announcements

We are the Symbiota Support Hub

 themerekat

Search all discussions

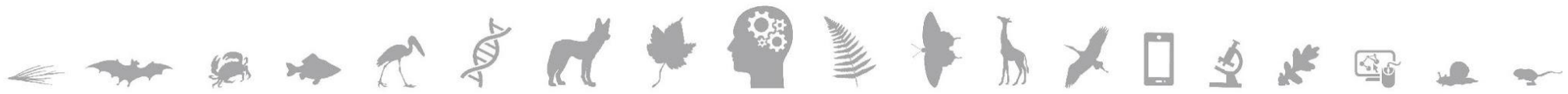
New Top: All Answered Unanswered Label

New discussion

- Categories
- View all
 - Announcements
 - Funding
 - General
 - Q&A

- ↑ 0 Add catalog number to label printing tools
themerekat started 5 days ago in Wish List
- ↑ 1 We are the Symbiota Support Hub
themerekat announced 5 days ago in Announcements
- ↑ 1 Welcome to symbiota-docs Discussions!
arbolitoloco started on Mar 15 in General

<https://github.com/BioKIC/symbiota-docs/discussions>










Search all discussions

New Top: All ▾ Answered Unanswered Label ▾

Categories 

 View all

-  Announcements
-  Funding
-  General
-  Problems/Bugs
-  Q&A
-  Show and tell
-  Wish List

↑ 0



Add catalog number to label printing tools

themerekat started 5 days ago in Wish List

↑ 1



We are the Symbiota Support Hub

themerekat announced 5 days ago in Announcements

↑ 1



Welcome to symbiota-docs Discussions!

arbolitoloco started on Mar 15 in General



Now, in Symbiota Docs, you can:

- Receive announcements




Categories


 View all

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Now, in Symbiota Docs, you can:

- Receive announcements
- Strategize to fund new developments



Categories


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 Wish List



Now, in Symbiota Docs, you can:

- Receive announcements
- Strategize to fund new developments
- Report problems/bugs

Categories

 View all

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 Q&A

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Now, in Symbiota Docs, you can:

- Receive announcements
- Strategize to fund new developments
- Report problems/bugs
- Ask questions

Categories


 View all

 Announcements

 Funding

 General

 Problems/Bugs

 Q&A

 Show and tell

 Wish List



Now, in Symbiota Docs, you can:

- Receive announcements
- Strategize to fund new developments
- Report problems/bugs
- Ask questions
- Request new features or changes

Categories


 View all

 Announcements

 Funding

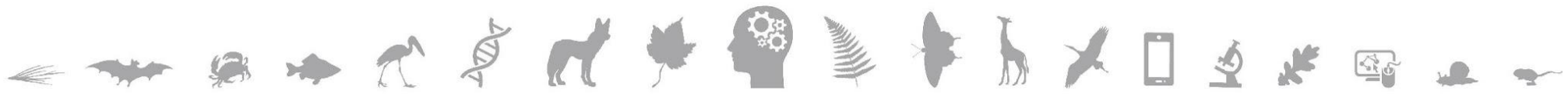
 General

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Label issues and pull requests for new contributors Dismiss

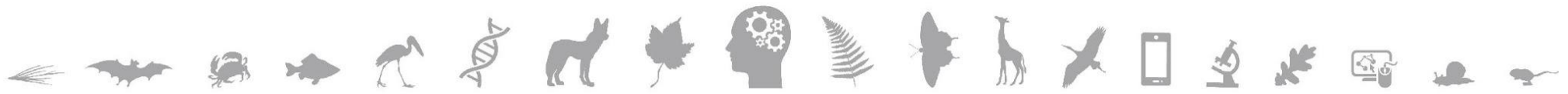
Now, GitHub will help potential first-time contributors discover issues labeled with **good first issue**

[Go to Labels](#)

Filters Labels 17 Milestones 1 [New issue](#)

<input type="checkbox"/>	12 Open ✓ 8 Closed	Author	Label	Projects	Milestones	Assignee	Sort
<input type="checkbox"/>	Tool to batch add annotations from a CSV file enhancement #14 opened 5 days ago by themerekat						
<input type="checkbox"/>	Decide whether Contact Us should be email link or a link to Discussions board in GitHub documentation symbiota-docs #11 opened 8 days ago by themerekat						
<input type="checkbox"/>	Make a way to request a certain page? documentation symbiota-docs #10 opened 8 days ago by themerekat						
<input type="checkbox"/>	Implement a "MOST RECENTLY Modified By" field #15 opened 13 days ago by themerekat						
<input type="checkbox"/>	Map cultivation status checkbox (true/false) with degreeOfEstablishment All Portals data standards						

<https://github.com/BioKIC/symbiota-docs/issues>



Symbiota Support Group

- Symbiota demonstrations & training for you, your staff, students, collectors, etc.
- Questions welcome
- First Mondays of the month @ 12:00 PM Pacific / 3:00 PM Eastern
- Starting **December 6, 2021.**
 - Topic: Symbiota Help, Resources, and Discussions

ASU Hosted

- Invertebase
- SEINet
- CCH2
- Fern Portal
- Madrean Discovery

- STRI Invertebrates
- Invertebase

- SEINet AZ-NM chapter
- SERNEC
- Consortium of Midwest Herbaria
- Mid-Atlantic Herbaria

University of Minnesota

- Minnesota Biodiversity Atlas

Santa Barbara Botanic Gardens

State of the Portals
Hub Meetings with each Portal to understand the current state: key players, challenges, needs, and more

- CNABH
- Gabon portal
- Neotropical plants
- SCAN
- NEON
- Ecdysis
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Great Lakes Invasives Network

Cal Academy

- Monarch (deprecated)

Public Symbiota Portals



Community Support: Symbiota Google Group

- symbiotagroup@googlegroups.com

iDigBio's: Symbiota Support Hub

- symbiota@asu.edu



Webinar Series Survey

https://ufl.qualtrics.com/jfe/form/SV_8dj1FtMT6Sp45T0



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