

Leveraging the Symbiota Support Hub for Biodiversity Data Mobilization



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What is Symbiota?

Symbiota Portals

**Data Mobilization
Tools**

**Symbiota
Support Hub**

**Data Mobilization
Efforts**

What is Symbiota?

Open Source Software

<https://github.com/BioKIC/Symbiota>

What is Symbiota?

**Biodiversity
data
aggregator**

Open Source Software

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What is Symbiota?

- Themed “portals” containing data from multiple sources
- Community-managed
- Data “snapshots” and live-managed data

**Biodiversity
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aggregator**

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What is Symbiota?

Biodiversity
data
aggregator

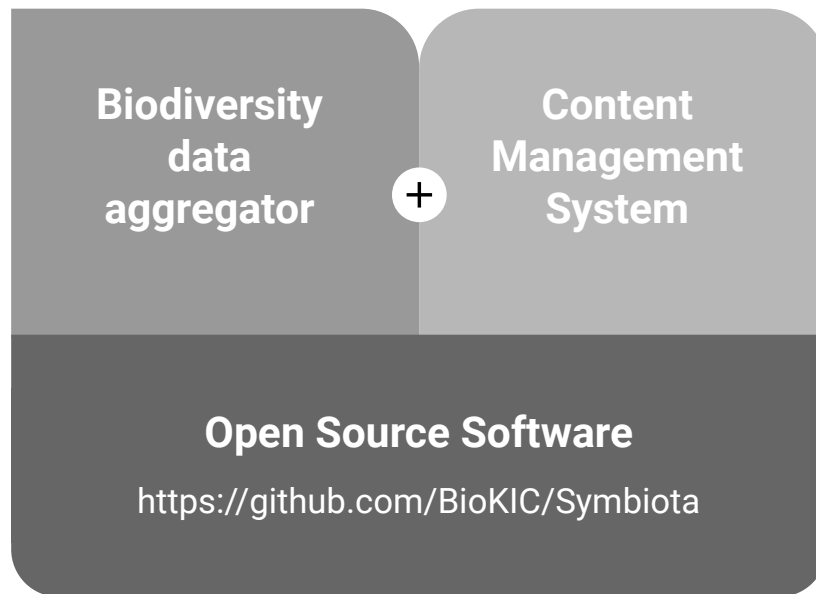
+

Content
Management
System

Open Source Software

<https://github.com/BioKIC/Symbiota>

What is Symbiota?



- Web-based data entry and editing interface
- Data cleaning and curation tools
- Supports multiple, remote users

What is Symbiota?

Symbiota Portals

Data Mobilization Tools

Symbiota Support Hub

Data Mobilization Efforts

- Consortium of Small Vertebrate Collections



- Gabon portal
- Guatemala portal
- Minnesota Biodiversity Atlas



- InvertEBase



- Bryophyte Portal
- CCH2
- PteridoPortal
- SEINet Network (15 regional portals!)



- Lichen Portal
- MyCoPortal



Coming soon!



- Bee Library
- Ecdysis
- SCAN



Welcome to the data portal for the Pteridophyte Collections Consortium (PCC)! Pteridophytes (ferns, lycophytes, and their extinct seed-free relatives) are a diverse group of plants that today comprises approximately 12,000 species and plays a major role in terrestrial ecosystems. Pteridophytes were even more important in the past, especially before the evolution of the gymnosperms and the flowering plants. This group of land plants was the first to evolve roots and leaves, the first to colonize drier habitats, and the first to form forests.

Historically, the research communities interested in living pteridophytes and those studying the fossil ones were largely separate from each other. The extant and fossil specimens were housed in different facilities (herbaria and paleontological museums, respectively) and their researchers often worked in different departments. The PCC was created to promote the integration of these communities by bringing together specimen data and associated resources for both living and fossil pteridophytes.

This portal provides one-stop access to digitized fossil and herbarium pteridophyte specimens, and their associated data. Initially these data will be from the collections of our core 36 PCC member institutions. However, in the future we hope to include collections from new PCC-affiliated institutions, and to partner with other institutions worldwide to serve their data through the PCC portal.

For more information about pteridophytes or the PCC, please visit our [PCC website](#) and follow us on Facebook and Twitter.

Search Taxon

Search





Minnesota Biodiversity Atlas

Bell Museum



MAPPING BIODIVERSITY
locally, globally


The **Technical Aspect** of Data Mobilization

Data Mobilization Tools

- Public search portal (mini-aggregator)

Public Search & Mapping Pages

Consortium of Bryophyte Herbaria
- building a Global Consortium of Bryophytes and Lichens as keystones of cryptobiotic communities -



Home Search Images Species Checklists Crowdsourcing Associated Projects More Information Sitemap Help Welcome Katerlin [My Profile](#) [Logout](#)

Home >> Collections >> Search Criteria

Taxonomic Criteria

Include Synonyms

Scientific Name

List Display
Table Display
Reset Form

Locality Criteria

Country:

State/Province:

County:

Locality:

Elevation (in meters):

Consortium of Bryophyte Herbaria
- building a Global Consortium of Bryophytes and Lichens as keystones of cryptobiotic communities -



Home Search Images Species Checklists Crowdsourcing Associated Projects More Information Sitemap Help Welcome Katerlin [My Profile](#) [Logout](#)

Home >> Image Contributors >> Image Search

Latitude and Longitude

Bounding box

Northern Latitude:

Southern Latitude:

Western Longitude:

Eastern Longitude:







Collector Criteria

Collector's Name:

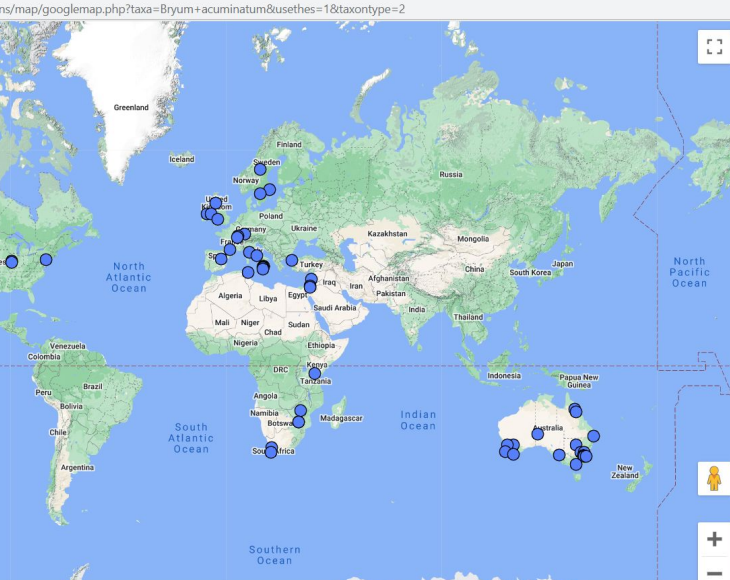
Collector's Number:

Search Criteria Images

Search criteria: HasOrganism
1 2 3 4 5 6 7 8 9 10 >> Last Page 4, records 601-800 of 9,512

 <i>Athalamia hyalina</i> Lampa, Wayne	 <i>Athalamia pinguis</i> Lorenz, Samantha	 <i>Atrichum altecristatum</i> Lampa, Wayne	 <i>Atrichum altecristatum</i> Lampa, Wayne	 <i>Atrichum altecristatum</i> Lampa, Wayne	 <i>Atrichum altecristatum</i> Lampa, Wayne
---	---	--	--	--	--

bryophyteportal.org/portal/collections/map/googlemap.php?taxa=Bryum+acuminatum&usethes=1&taxotype=2



Legend
● = *Rosulabryum torquescens* (Bryum torquescens, Bryum capillare)

Add Point of Reference
 Marker Name:

Keyboard shortcuts Map data ©2022 1000 km Terms of Use

SEINet

Arizona - New Mexico Chapter

Home | Specimen Search | Images | Flora Projects | Agency Floras | Dynamic Floras | Additional Websites | Resources

Welcome Katelin! [My Profile](#) [Logout](#) [Sitemap](#)

[Home](#) > [Arizona Flora](#) > [Huachuca Mountains](#)

Huachuca Mountains ♂ Games

Authors: Janice Bowers and Steve McLaughlin

Citation: JANAS Vol 29(2) - plus additional species based on vouchers collected by Bowers and McLaughlin post publication
[more detail](#)

Families: 105

Genera: 479

Species: 1010

Total Taxa ([details](#)): 1021

Page 1 of 11: [1](#) | [2](#) | [3](#) | [4](#) | [5](#) | [6](#) | [7](#) | [8](#) | [9](#) | [10](#) | [11](#)

Image source: all images linked voucher images only



[Anisacanthus thurberi](#)
[ACANTHACEAE]



[Dyschoriste decumbens](#)



[Sambucus cerulea](#)
[ADOXACEAE]



[Amaranthus powellii](#)
[AMARANTHACEAE]



[Chenopodium fremontii](#)

Checklist Creation Features

Search:

- Common Names
 Synonyms

Taxonomic Filter:

Original Checklist

- Common Names
 Display as images
 Show Taxa Alphabetically



CCH2
Specimen data from the Consortium of California Herbaria


Home Search Collections Map Se
Home >> Collections >> Search Criteria >


Species List

Dataset: All Collections
Taxa: *Triodanis biflora* (*Triodanis biflora*, *Specularia californica*)
Search Criteria: excluding

1 2 3 4 5 6

CAS - California Academic Sciences

 [Triodanis biflora](#)
182819 She
United States, California, Tuare County, Along road above Vision Fork Tule River, 0.5-0.7 mile above junction with California highway 190, 36.170833333333 -118.71914m
[Full Record Details](#)



 [Triodanis biflora](#)
182834 She
United States, California, Tuare County, Along road above Vision Fork Tule River, 0.5-0.7 mile above junction with California highway 190, 36.170833333333 -118.71914m

Collections Search Download - Google Chrome
cch2.org/portal/collections/download/index.php
Logout Sitemap

general terms posted on the website.

Download Specimen Records

Structure:

- Symbiota Native 
- Darwin Core 

[*What is Darwin Core?](#)

Data Extensions:

- include Determination History
- include Image Records
- include Occurrence Trait Attributes

*Output must be a compressed archive

File Format:

- Comma Delimited (CSV)
- Tab Delimited

Character Set:

- ISO-8859-1 (western)
- UTF-8 (unicode)

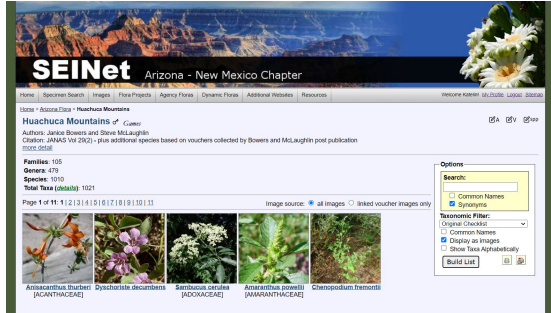
Compression:

- Compressed ZIP file

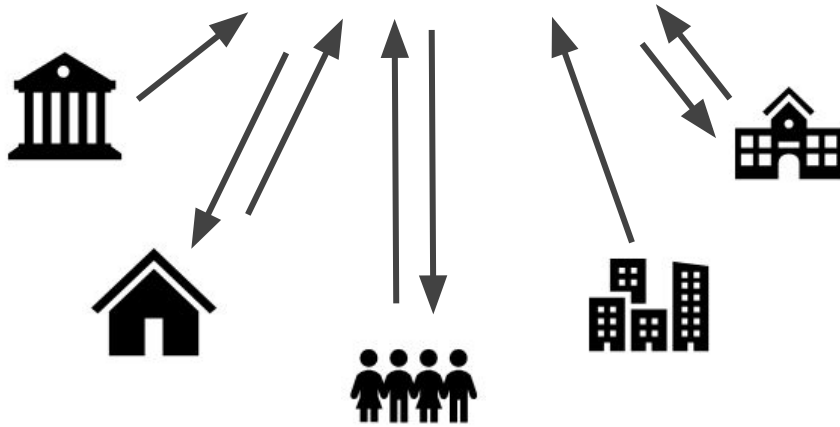
Data Downloads

Data Mobilization Tools

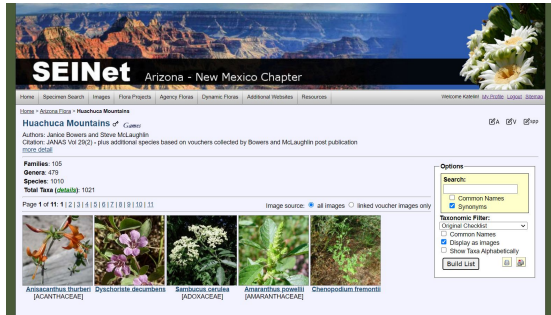
- Public search portal (mini-aggregator)
- Easy **export** and **publishing** functions



Symbiota Portal

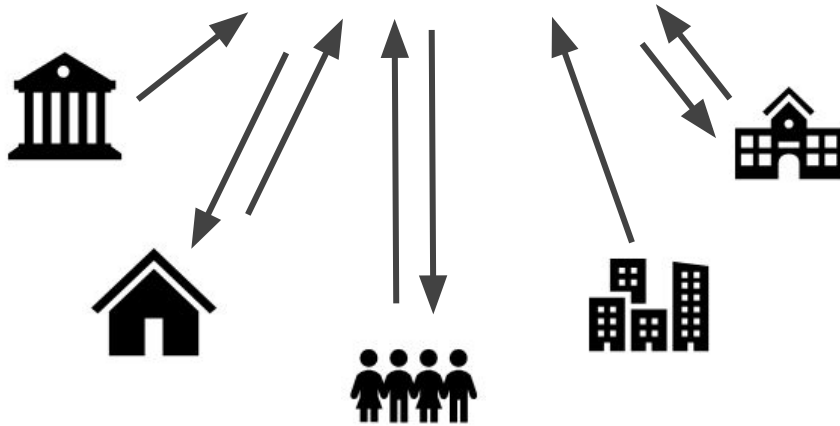


Data Providers
& Data Users



Symbiota Portal

Darwin Core Archive



Data Providers & Data Users

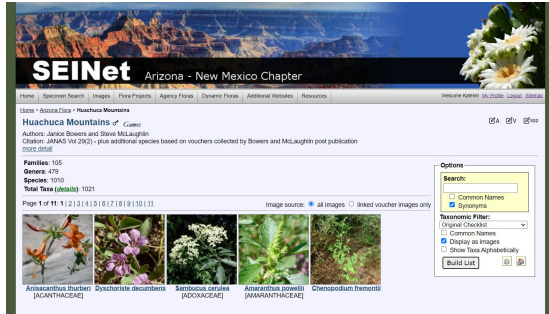
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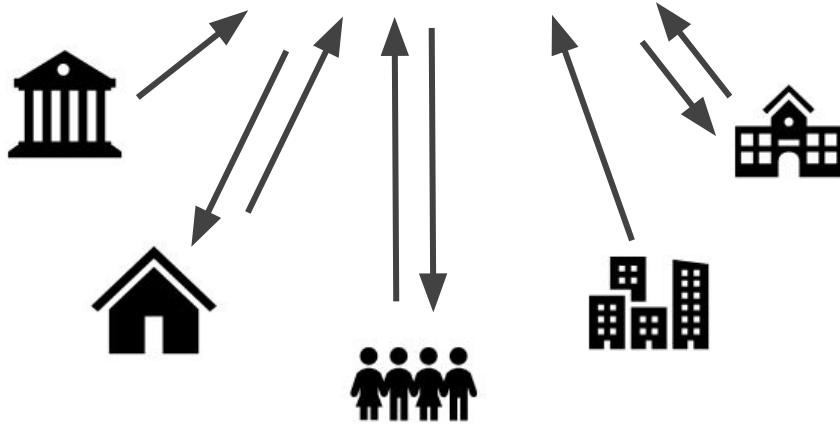


Symbiota
Portal

Aggregators



Darwin Core
Archive



Data Providers
& Data Users

[Get data](#)[How-to](#)[Tools](#)[Community](#)[About](#)

kdpearso

OCCURRENCE DATASET | REGISTERED MARCH 26, 2019

Duke University Herbarium Bryophyte Collection

Published by [Duke University Herbarium](#)[DATASET](#)[METRICS](#)[ACTIVITY](#)[↓ DOWNLOAD](#)

173,867 OCCURRENCES

107 CITATIONS

The L. E. Anderson Bryophyte Herbarium includes approximately 260,000 specimens, of which some 220,000 are mosses. With about 50,000 moss collections from the southeastern United States, the DUKE collection is one of, if not the most important, resource for documenting the southeastern moss flora. Important collections of bryophytes include those of L.E. Anderson, H.L. Blomquist, M. Crosby, A.J. Grout, B.D. Mishler, W.B. Schofield, R. Schuster, A.J. Shaw, 48 bryophyte exsiccatae collections, and over 900 bryophyte type specimens.

Publication date: September 1, 2022**Metadata last modified:** September 1, 2022**Hosted by:** [Symbiota Support Hub](#)**Licence:** [CC BY-NC 4.0](#)[How to cite](#) [DOI](#) 10.15468/bgfxdc173,867
Occurrences99.9%
With taxon match49%
With coordinates93%
With year

84,562 GEOREFERENCED RECORDS



The **Social Aspect** of Data Mobilization

Symbiota Support Hub

- Support team & infrastructure services to support Symbiota portals and their communities

Symbiota Support Hub Team



Jenn Yost
Community
Lead



Katie Pearson
Data Manager



Greg Post
IT & System
Administrator



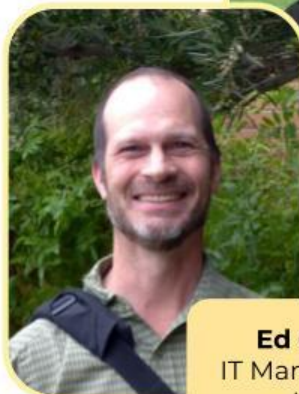
**Samanta
Orellana**
International
Community
Coordinator



Lindsay Walker
Community Manager



Nico Franz
Management @ASU



Ed Gilbert
IT Management
Lead



Laura Prado
Biodiversity
Informatician

Data Mobilization with the Hub

- Documentation and help services
 - **Help Desk:** help@symbiota.org
 - **Help & Tutorials:** symbiota.org/docs
 - **Discussion and Q&A board:**
<https://github.com/BioKIC/symbiota-docs/discussions>

Symbiota Docs

HOME

ABOUT

FAQ

CITING THE DOCS

CONTACT

CONTRIBUTING

SEARCH

DOCS ▾

En ▾

as a Publisher

- Publishing Data to GBIF
- Publishing Data to iDigBio
- Redacting / Obscuring Data
- Downloading a Copy of your Database
- Download a Subset of Data (Exporter)
- Duplicate Clustering
- Deleting Records
- Editing Occurrences
 - Batch OCR
 - Batch Editing
- Editing Collection Metadata and Contact Info
- Georeferencing
 - GEOLocate CoGe
- Images

5. Before you can submit data, you will need to contact GBIF help desk (helpdesk@gbif.org) and request for the portal's GBIF user account to be given permission to create and update datasets within your institution's publishing instance. The GBIF username associated with the Symbiota portal installation is displayed in paragraph above the Submit Data button. Click on the GBIF email address to automatically generate a message within your email client.

6. Once you hear back from GBIF affirming that the portal has permission to submit data to your publisher, click the Submit Data button. A link to your GBIF dataset will be immediately displayed, though it may take an hour or so for your data to be loaded, indexed, and available.

The screenshot shows a web browser displaying a Symbiota portal page titled "Publishing to GBIF from a Symbiota Portal". The page features a navigation bar with "DATASET", "METRICS", "ACTIVITY", and "DOWNLOAD" tabs. Below the navigation, there are filters for "Occurrences", "With taxon match", "With coordinates", and "With year". A section titled "1,042 OCCURRENCES WITH IMAGES" displays a grid of images, including specimens and frogs. A large red YouTube play button is overlaid on the page. Below the images, there are sections for "Data description", "GBIF registration", and "Citation". The "Data description" section includes "Metadata language: English". The "GBIF registration" section includes "Registration date: December 7, 2021", "Metadata last modified: December 7, 2021", "Hosted by: Arizona State University Biodiversity Knowledge Integration Center", "Installation: Gabon Biodiversity", "Endpoints: https://gabonsymbiota.org/portal/content/owca/GBIF-Amphibia_DeC-A.zip (Bawen Core Archive)", and "Preferred identifier: DOI:10.13448/ia/7g". A "Watch on YouTube" button is visible in the bottom left corner of the screenshot.

Data Mobilization with the Hub

- Documentation and help services
- Portal Advancement Campaigns: focused, month-long efforts to increase data quality and mobilization in a Symbiota community

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**>1.3 million
occurrences**

Added to GBIF since February 2022

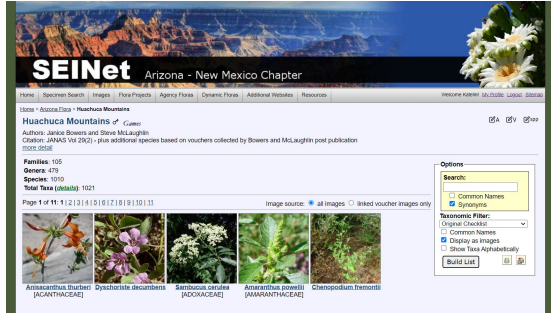
**20
collections**

Data Mobilization with the Hub

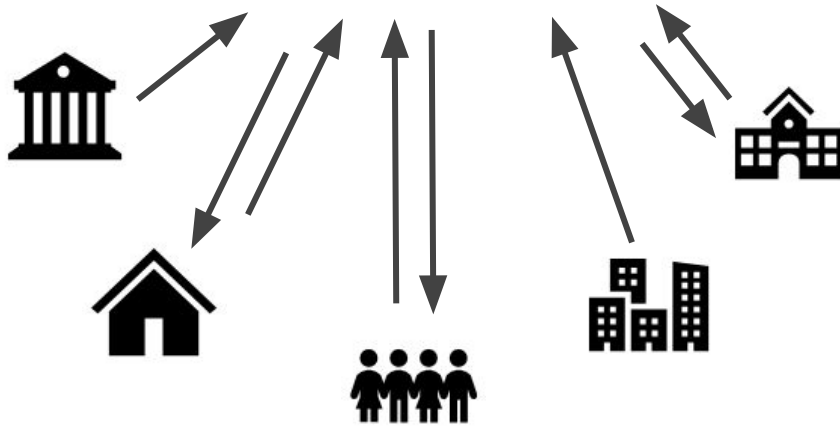
- Documentation and help services
- Portal Advancement Campaigns
- API development

Symbiota API

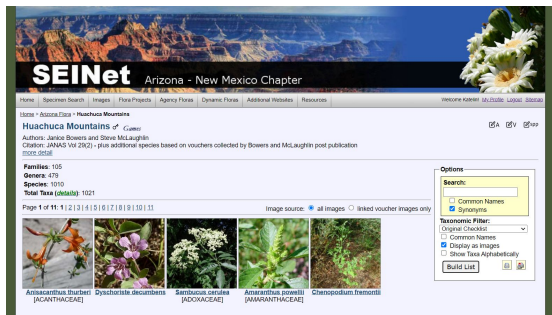
- Enhanced automated communication between Symbiota portals *and other data sources with API capabilities*



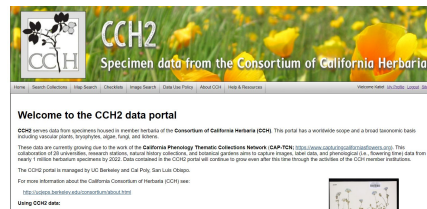
Symbiota Portal



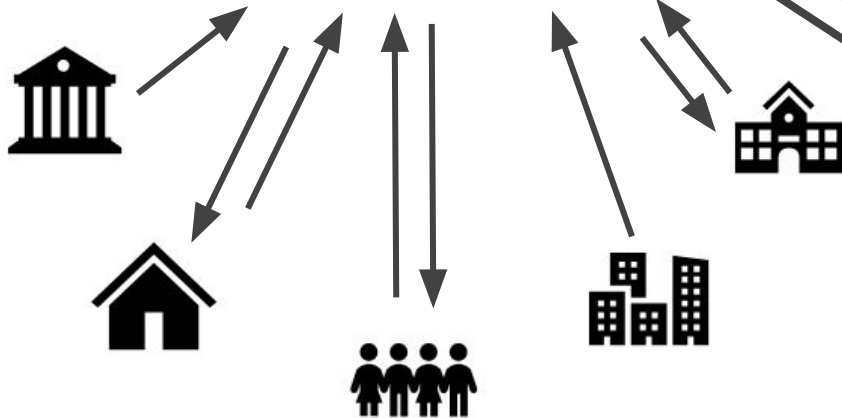
Data Providers & Data Users



Symbiota Portal



Symbiota Portal(s)



Data Providers & Data Users



Other specimen data providers & systems



API-enabled data providers



Learn more at
symbiota.org

help@symbiota.org

