Ecdysis
Portal Advancement Campaign

Office Hours - February 6, 2023

iDigBio
Integrated Digitized Biocollections

Symbiota

Introductions

- **Steering Committee & SSH**
- **Community Members**

Add your info here: bit.ly/ecdysis-intros

Questions and comments welcome!
(use chat and/or raise your Zoom hand)

Agenda

1. Refresher: what/who are iDigBio and the Symbiota Support Hub?
2. Portal Advancement Campaign: goals and schedule
3. Portal history, stats, and activity
4. Resources and services available
5. Portal housekeeping
6. Upcoming items
7. Questions & discussion

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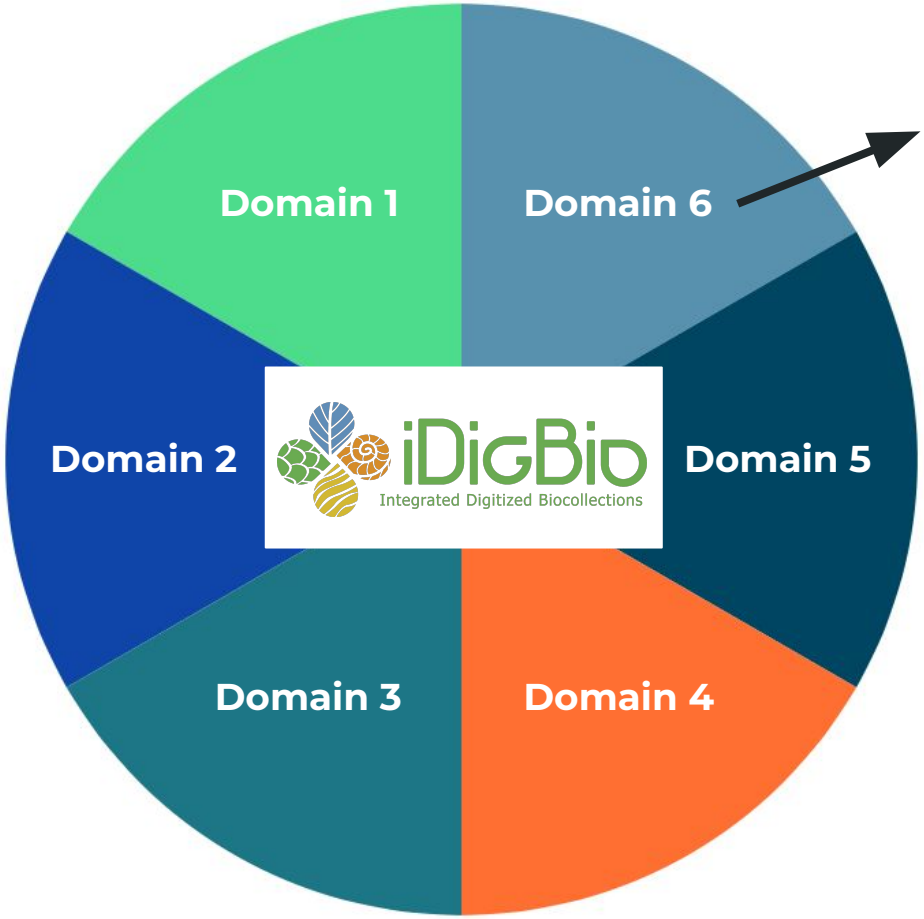
Who are iDigBio & the Symbiota Support Hub?

- National Resource for Advancing Digitization of Biodiversity Collections (ADBC) funded by the National Science Foundation
- 1st NSF grant 2011-2016, 2nd grant 2016-2022, **3rd grant 2021-2027 (sustaining)**



Symbiota
Support Hub

Symbiota Support Hub (SSH) 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.

help@symbiota.org

Symbiota Support Hub Team

Jenn Yost
Community Lead

Katie Pearson
Project & Data Manager

Greg Post
IT & System Administrator

Samanta Orellana
Community Coordinator for Latin America

Ed Gilbert
IT Management Lead

Lindsay Walker
Community Manager

Nico Franz
Management @ ASU

Logan Wilt
Developer

Mark Fisher
Developer

SSH is here to **support** existing communities and managers, not replace them.

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Portal Advancement Campaign: Goals

- **Improve data quality, accessibility, and mobilization**
  - Ensure metadata is up to date
  - Provide data cleaning services
  - Offer data publishing assistance

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  - Training and improved documentation
  - Troubleshooting to overcome current roadblocks
  - Incorporation of data from collections not currently in the portal

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  - Incorporation of data from collections not currently in the portal
- **Discuss next steps**
  - Identify and incorporate portal improvements or desired modules
  - Identify current needs and potential avenues for future support from SSH and the Ecdysis Steering Committee

Portal Advancement Campaign: Schedule

- **Feb. 6:** Community & SSH intros, resources
  - Introduction to the campaign
  - General housekeeping
- **Feb. 13:** Introduction to data entry in Ecdysis
  - Cataloging basics and demo
- **Feb. 20:** Taxonomy tools in Ecdysis
  - Demystifying the thesaurus
  - Adding and editing taxonomy demo
- **Feb. 27:** Campaign summary
  - Data publishing 101
  - Next steps for community growth and sustainability

All at
1PM Pacific /
4PM Eastern
Tuesdays

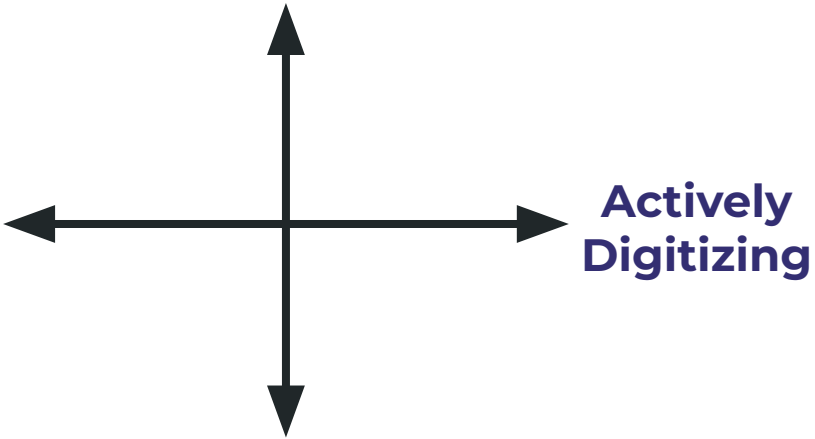
What we need from you:

- Ideas
- Feedback
- Interact with us as much as possible
- Take a look at your collection and give it a little extra attention this month
- Let us know how we can help
- Respond to our emails with questions

We can help wherever you are

(Ecdysis *is* your database)

Live-managed



Snapshot

(you actively manage your data somewhere else)

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Portal History

2019

- Launched Ecdysis to utilize **updated Symbiota code base** and be a **partner portal** to SCAN (Symbiota Collections of Arthropods Network)
- Designed to be a portal for **live-managed datasets** and **active research projects** - not to be another mid-level aggregator

Portal History

2021

- Started pushing subsets of bee data from Ecdysis collections to **Bee Library**
  - Starting to realize a **broader vision** of **interconnected data portals** during this time
- **Symbiota Support Hub** was established and began supporting the Ecdysis user community
  - Ecdysis became one of the major portals to **first receive new development features** as they were released

Portal History

Mid 2023

- Many **live-managed** collections migrated from SCAN to Ecdysis
  - Ecdysis became the primary Symbiota live-management option for insect collections

Portal History

Mid 2023

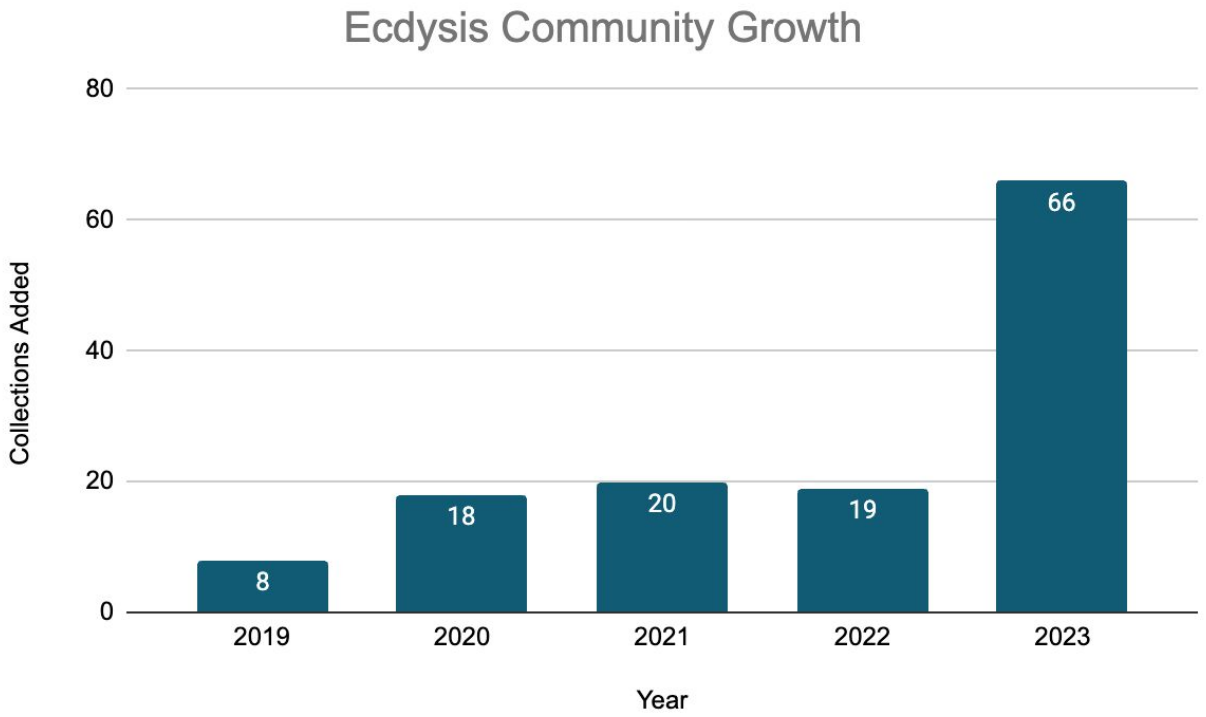
- Many **live-managed** collections migrated from SCAN to Ecdysis

Late 2023

- Steering Committee formed: https://ecdysis.org/misc/contacts.php

ecdysis

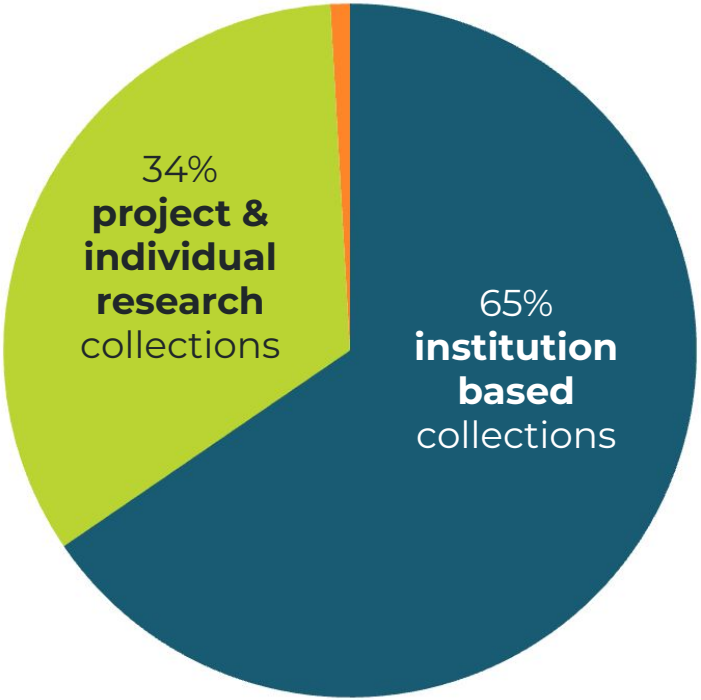
A portal for live-data arthropod collections



ecdysis

A portal for live-data arthropod collections

- **110 collections**
  - 72 institutional
  - 37 project/individual
  - 1 teaching collection



(Stats as of Dec 2023)

ecdysis

A portal for live-data arthropod collections

- **110 collections**
  - 72 institutional
  - 37 project/individual
  - 1 teaching collection
- **2,974,858 occurrences**
  - 532,504 (~17%) total images
  - 2,235,604 (75%) georeferenced
  - 108,296 type specimens

61%
(55 coll.)
publishing to GBIF

(Stats as of Dec 2023)

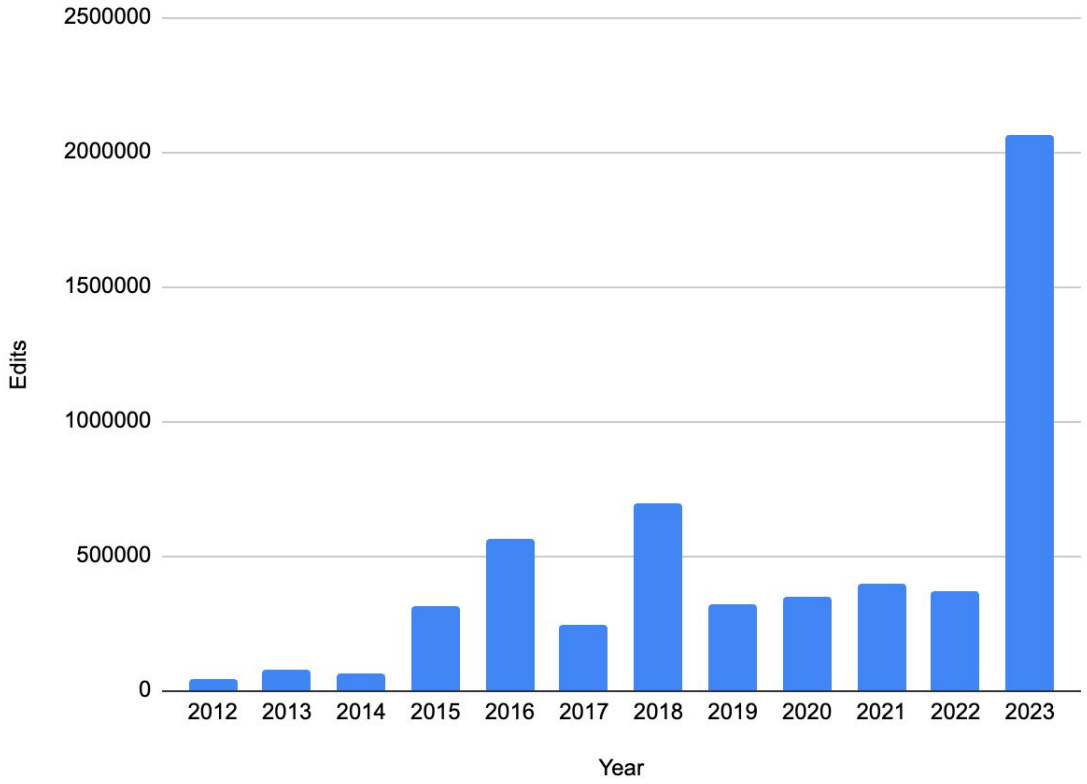
Current Contributors - Institutional Collections

Academy of Natural Sciences
Arizona Department of Agriculture
Arizona State University
Auburn University
Broward College
California Polytechnic State University, San Luis Obispo
California State University, East Bay
Centro de Investigación en Apicultura Tropical
Clemson University
Connecticut Agricultural Experiment Station
Davidson College
Denver Botanic Gardens Collection
Denver Museum of Nature & Science
Dugway Proving Ground Natural History Collection
Escuela Politécnica Nacional, Quito, Ecuador
Florida State Collection of Arthropods
Hannam University Systematic Entomology Laboratory
Instituto de Investigaciones Botánicas y Zoológicas
Luther Entomological Research Collection
Michigan Technological University
Museo de Historia Natural Unillanos
Museo del Fin del Mundo
Museo Nacional de Historia Natural
Natural History Museum of Utah
New Zealand Arthropod Collection
Northern Arizona University
Price Institute of Parasite Research
R. M. Bohart Museum of Entomology
Richard B. Dominick Moth and Butterfly Collection
Rutgers University Entomological Museum
Sagehen Creek Field Station
San Diego Natural History Museum
San Diego State University
Santa Barbara Museum of Natural History
Southeast Missouri State University
Southern Utah University
Spider Parasite Digital Research Collection
State of Vermont Forest Biology Lab
Texas Tech University
The Albert J. Cook Arthropod Research Collection
UCR Sede Guanacaste
Uganda National Insect Collection
United States National Museum
Universidad Autónoma de Chiriquí
Universidad de Colima
Universidad de Costa Rica
Universidad de Tierra del Fuego
Universidad del Magdalena
Universidad Nacional Agraria
University of Arizona
University of California Santa Barbara
University of California Santa Cruz
University of Connecticut
University of Georgia
University of Hawaii
University of Manitoba
University of Saskatchewan
University of Tennessee at Chattanooga
University of Vermont
University of Wisconsin-Stevens Point
Utah Tech University
Virginia Tech
Western Washington University

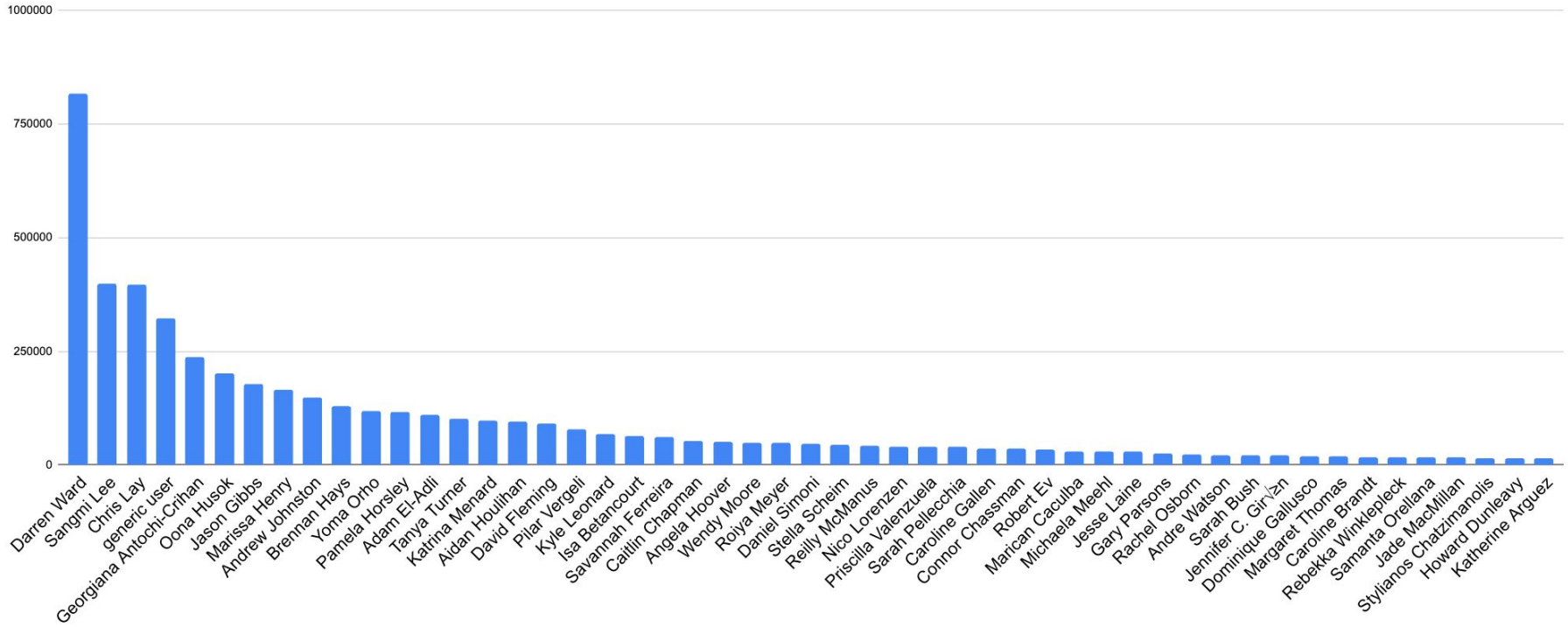
Current Contributors - Individual & Project-based

Academy of Natural Sciences – OrthopNet
Actual specimens of adult Odonata from the IIBZ Entomology Collection
Adam Haberski Research Collection
Buprestidae Specimen Database (BupBase)
California Channel Islands Beetles
Carolina Thomson MDE Scholarship and Research Collection
Chrysomelidae from the entomological collection of the IIBZ
Collection of Externally Processed Specimens (Arthropod Systematics Research)
Davide Dal Pos Research Collection
Diversidad de hormigas (Hymenoptera: Formicidae) en dos parques urbanos de la República Dominicana
Ethan Richard Wright Collection
Evan Waite Invertebrate Collection
Guy Hanley Insect Research Collection
Ian Watkinson Lepidoptera Collection
Ilgoo Kang Braconid Collection
Insect Color Specimen Database
Insectos asociados a las sabanas de montañas altas de República Dominicana
Jim Beley Entomology Collection
Kevin Cortés Research Collection
LACM Entomology Channel Islands Beetles
Louis F. Nastasi Insect Collection
M. Andrew Johnston Research Collection
M. Andrew Johnston Research Collection
Maeve Botham Research Collection
Maine State Museum - Brianne Du Clos
Nathaniel Green Research Collection
Northern Plains Research Collection
Oliver Keller Research Collection
Park Pollinators Project
Patrick S. Gorring Collection
Records Included in Literature
Rick Overson and Laura Steger Invertebrate Observations
RL Minckley Plant Collection
Salvatore S. Anzaldo Collection
Samanta Orellana Research Collection
Sangmi Lee Research Collection
Tyler J. Hedlund Collection
William Murphy Insect Collection

Edits Over Time



Top 50 Editors



Potential contributors?

- **Suggestions are welcome!**
  - https://bit.ly/new-portal-contributors

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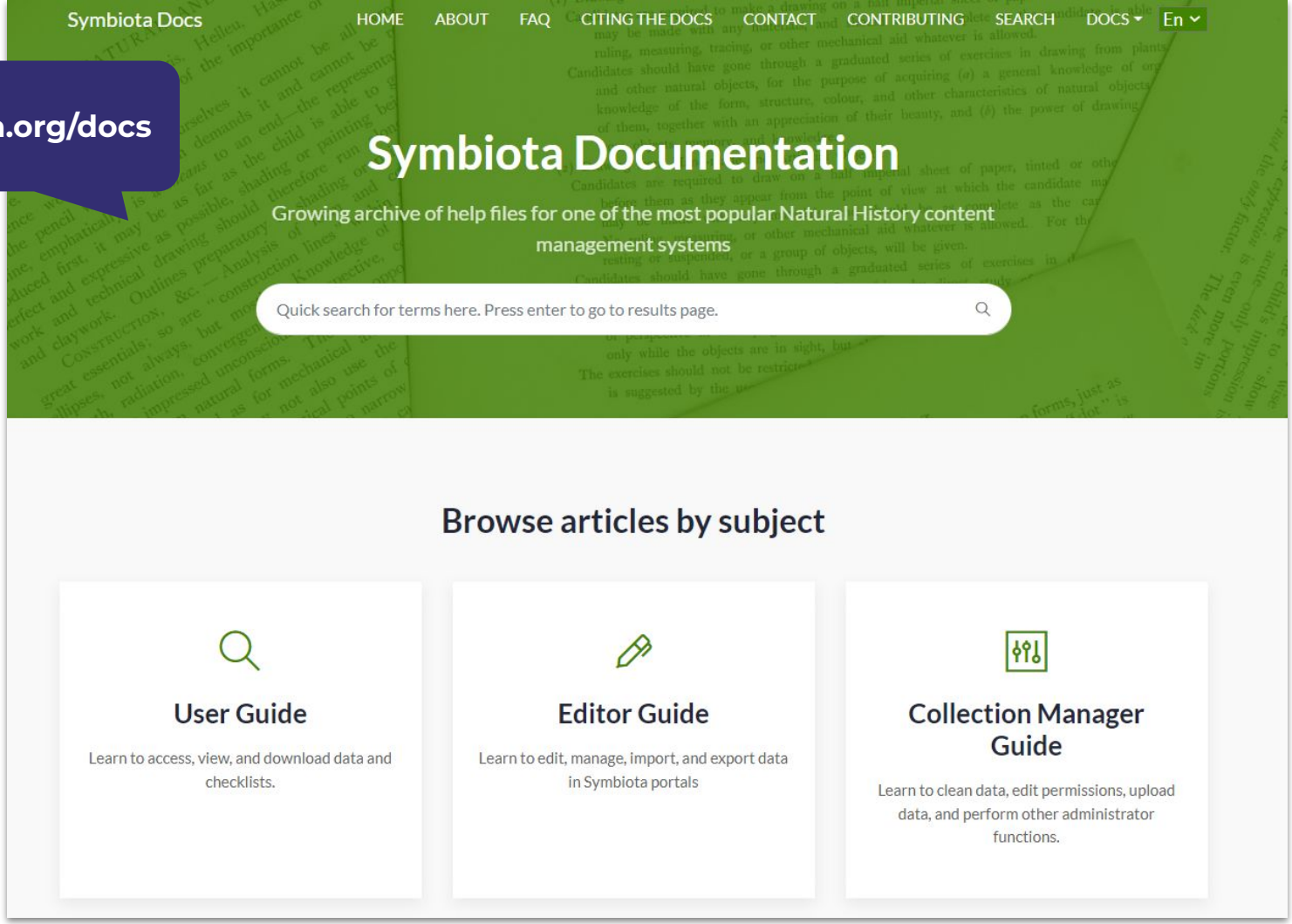
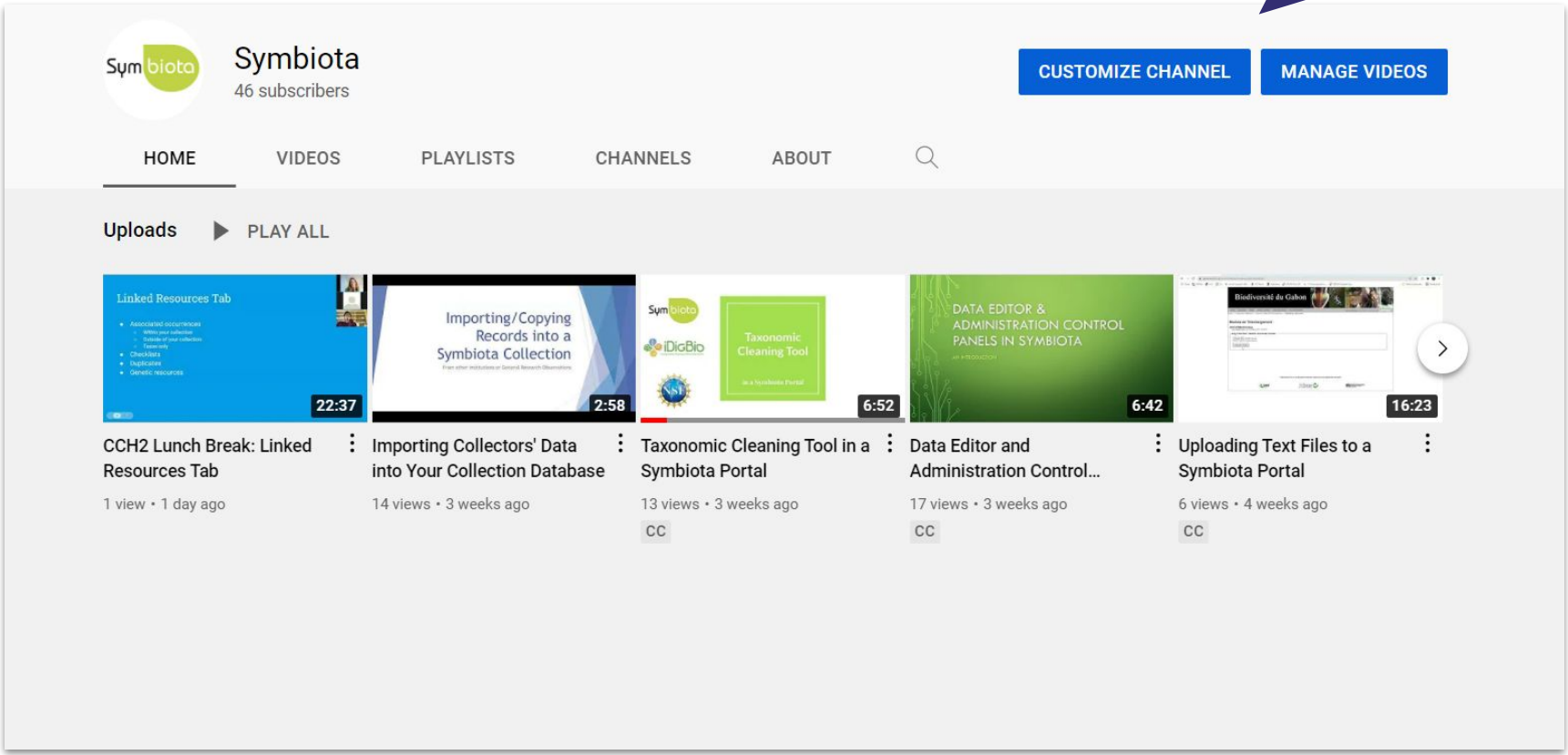
symbiota.org/docs



YouTube Channel

bit.ly/ symbiota-recordings



Any materials you'd like to add?

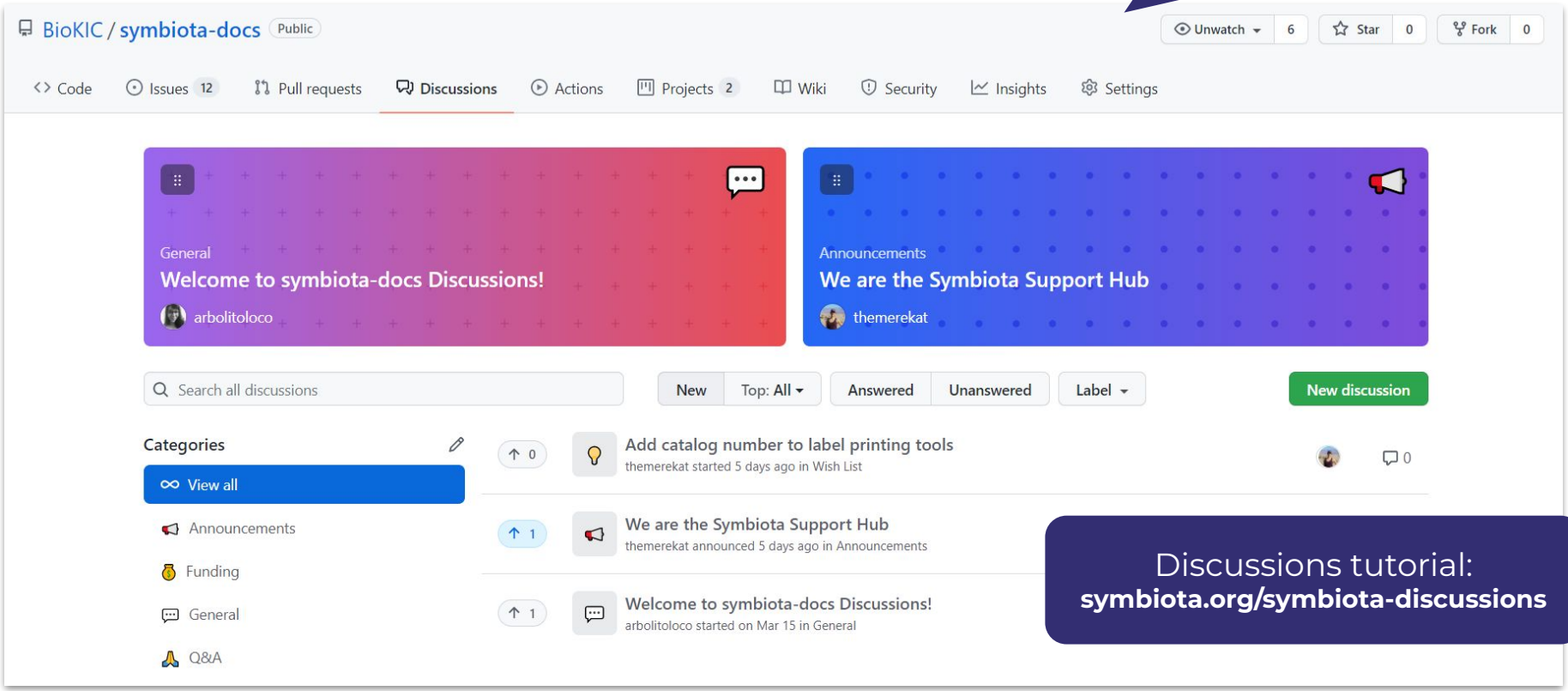
Let us know!

Campaign Docs

symbiota.org/
portal-advancement-campaigns/
ecdysis-portal-campaign

Symbiota Discussions

github.com/BioKIC/symbiota-docs/discussions



Discussions tutorial:
symbiota.org/symbiota-discussions

Help Desk Support

- Contact the Symbiota Support Hub at **help@symbiota.org**

Help Desk Support

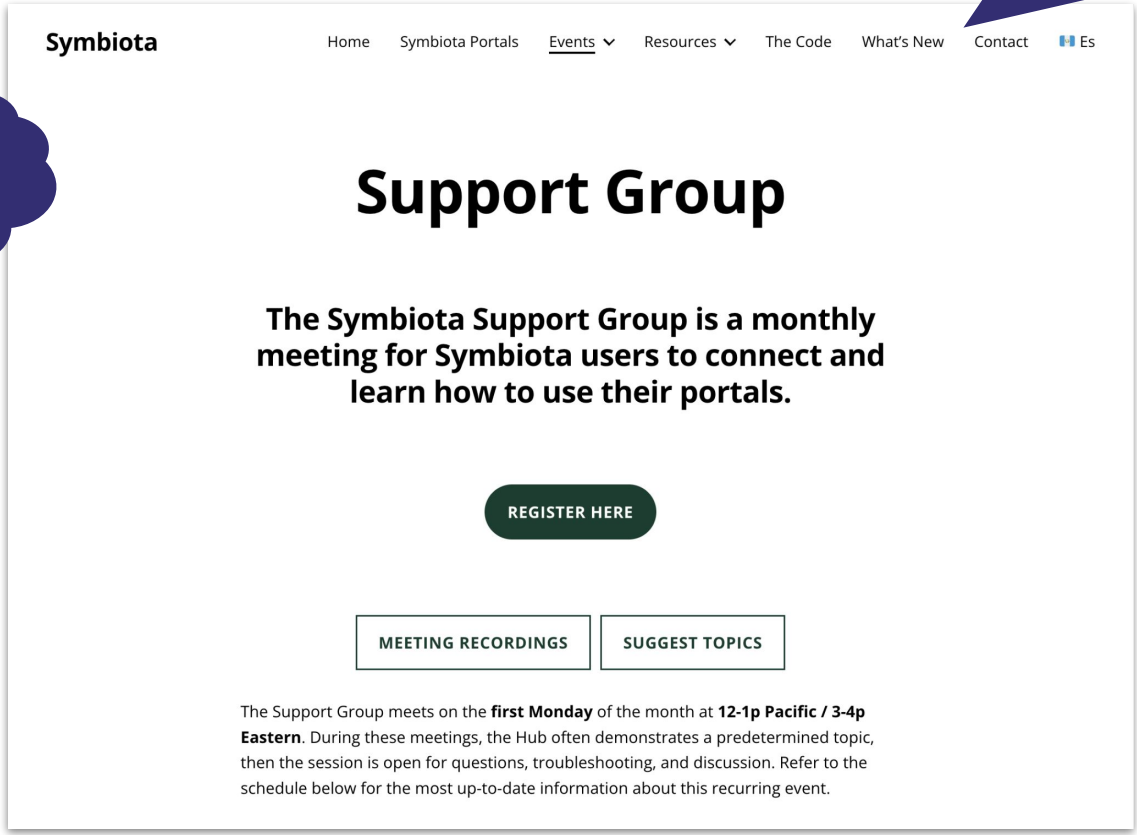
- Contact the Symbiota Support Hub at **help@symbiota.org**
- The Symbiota Support Hub can help with backend tasks.

Quick links to all resources are on our website:
symbiota.org/help-resources

Monthly Support Meetings

symbiota.org/ symbiota-support-group

1st Mondays



Documentación en Español

Para **colecciones entomológicas** y otros grupos

Grabaciones y más:

- symbiota.org/es
- biokic.github.io/symbiota-docs/es
- biodiversidadgt.github.io/docs/guia-rapida

Book chapter in Spanish!
https://doi.org/10.5281/zenodo.10424127

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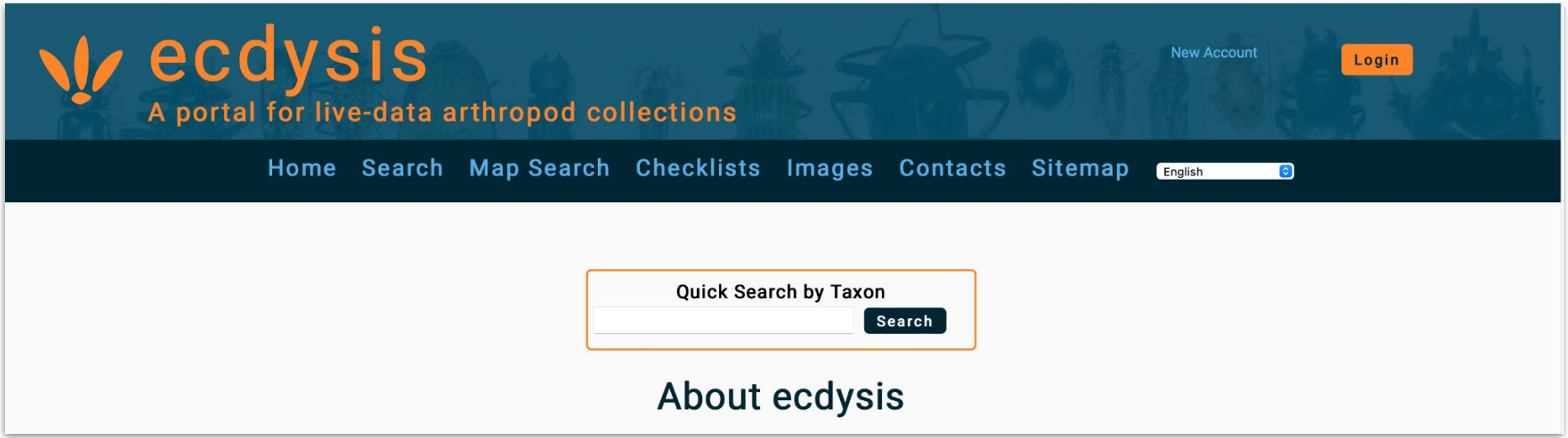
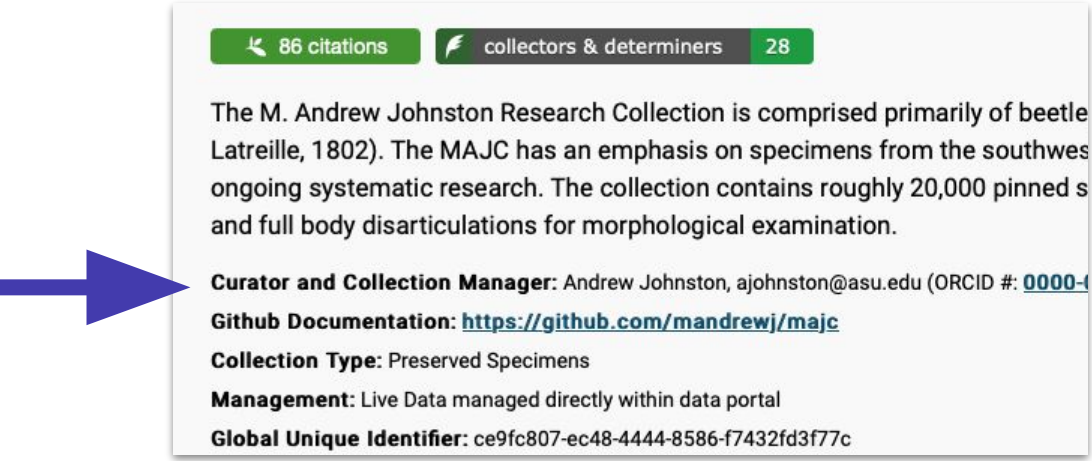
Portal Housekeeping

- Are you able to **log in** to your account?



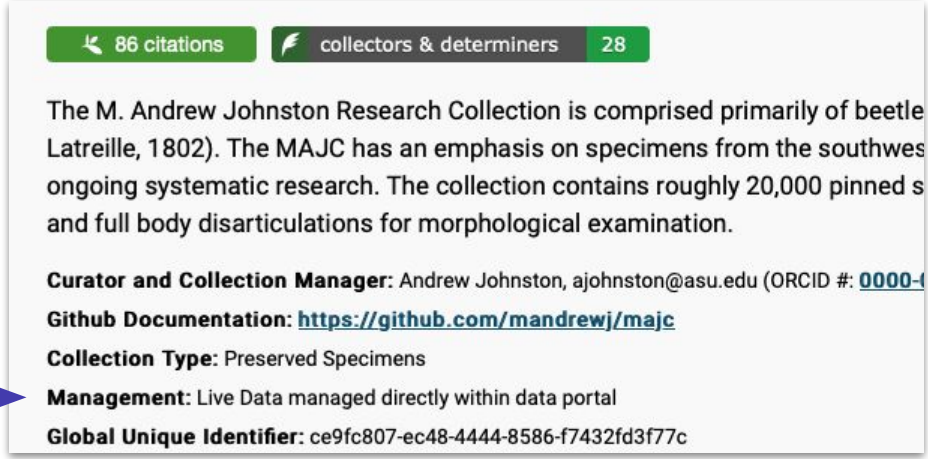
Portal Housekeeping

- Are you able to log in to your account?
- Is the **contact information** for your account up to date?
  - Add your **ORCID** if you have one!



Portal Housekeeping

- Are you able to log in to your account?
- Is the contact information for your account up to date?
- Are you managing your data **“live”** or as a **“snapshot”**?

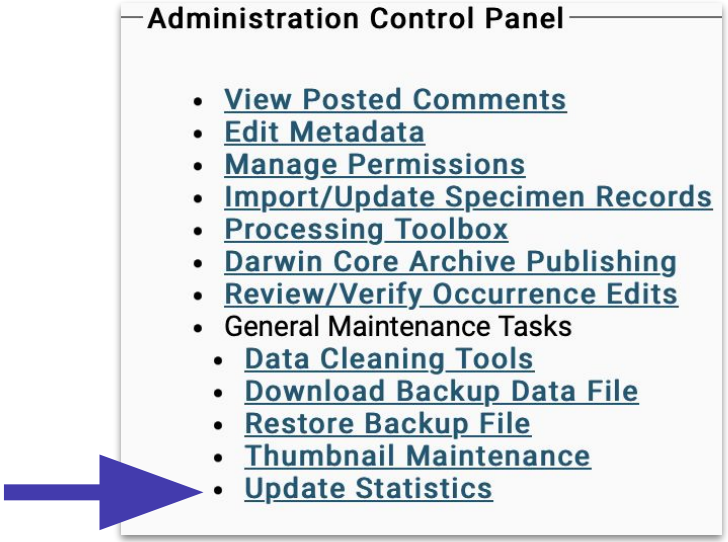


Portal Housekeeping

- Are you able to log in to your account?
- Is the contact information for your account up to date?
- Have you **updated your statistics** lately?

Collection Statistics

- 8,400 specimen records
- 7,101 (85%) georeferenced
- 2,540 (30%) with images (2,571 total images)
- 1 BOLD genetic references
- 7,911 (94%) identified to species
- 13 families
- 149 genera
- 326 species
- 347 total taxa (including subsp. and var.)



Portal Housekeeping

- Are you able to log in to your account?
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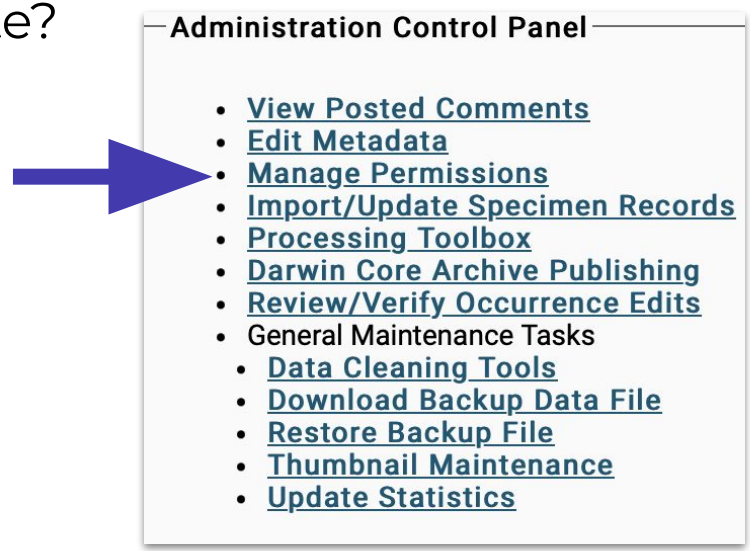
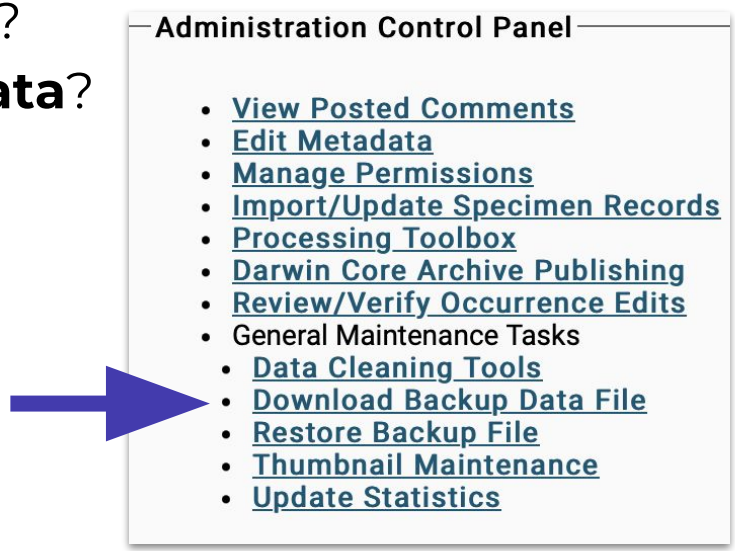
- Have you updated your statistics lately?
- Are your **user permissions** up to date?



Portal Housekeeping

- Are you able to log in to your account?
- Is the contact information for your account up to date?
- Have you updated your statistics lately?
- Are your user permissions up to date?
- Do you know how to **backup your data**?
    - ***Set a calendar reminder!*** ⏰ 🗓️



Portal Housekeeping

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- Have you updated your statistics lately?
- Are your user permissions up to date?
- Do you know how to backup your data?
- Do you have any **unreviewed comments**?

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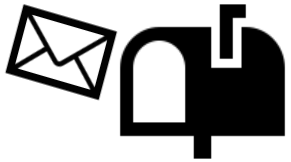
Data Cleaning Stats & Assistance

We have identified data quality issues in some collections, some of which ***we can help batch fix*!**

We will email you with data quality information specific to your collection, along **with a form that we ask you to fill out** to give us permission (or not) to conduct specific batch cleaning steps.

Please feel free to ask questions about this message during the discussion time at our upcoming Office Hours sessions.



Upcoming

Add hub@symbiota.org to your contacts

Dear Ecdysis community members,

As you may have heard, iDigBio's Symbiota Support Hub is working with your portal community to advance and improve the Ecdysis data portal, and we invite you to participate in this month-long event.

Join us on **Tuesdays in February at 1p Pacific / 4p Eastern** to get Symbiota training, fix long-standing data problems, start publishing your data to aggregators, and promote use of your specimen data. Register to receive the Zoom invitation below:

Office Hours: Register Here

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Ecdysis Portal Campaign

Office Hours - February 13, 2024

iDigBio
Integrated Digitized Biocollections

Symbiota

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- Data Entry in Ecdysis
  - Introduction
  - Data Entry Basics
  - Demonstration
- Q&A and Discussion

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  - **Introduction**
  - Data Entry Basics
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Introduction

Digitization = the conversion of specimen data from **analog to digital**

- Transcription of label text and other related documents
- Specimen imaging (2D, 3D)
- Georeferencing

Definition from Nelson & Ellis, 2019, *Philos Trans R Soc Lond B*, 10.1098/rstb.2017.0391

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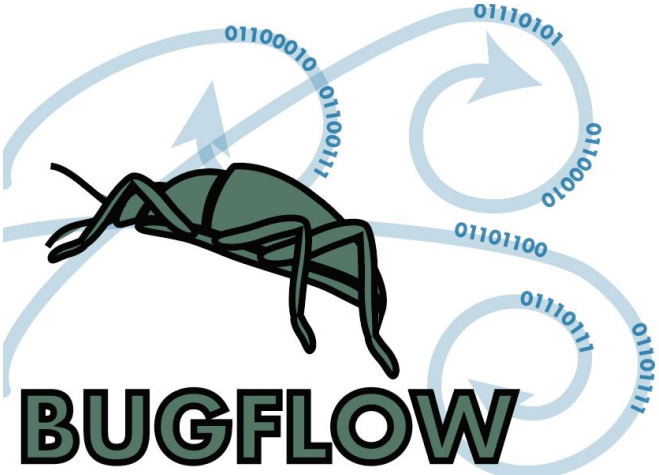
Introduction

Digitization Workflows

- Highly variable based on collection type and specimen preparation method (pinned vs. wet, bulk, etc.)
- **Common goal:** Data capture to increase specimen data accessibility

BugFlow:
https://entcollnet.github.io/BugFlow
Symbiota examples:
https://symbiota.org/digitization-workflows

- Includes full workshop recording



Introduction

Most data fields in Symbiota are **Darwin Core** (“DwC”) compliant

- https://dwc.tdwg.org/terms
- https://biokic.github.io/symbiota-docs/editor/edit/fields/
- Enables interoperability of data across collections and institutions

Navigation

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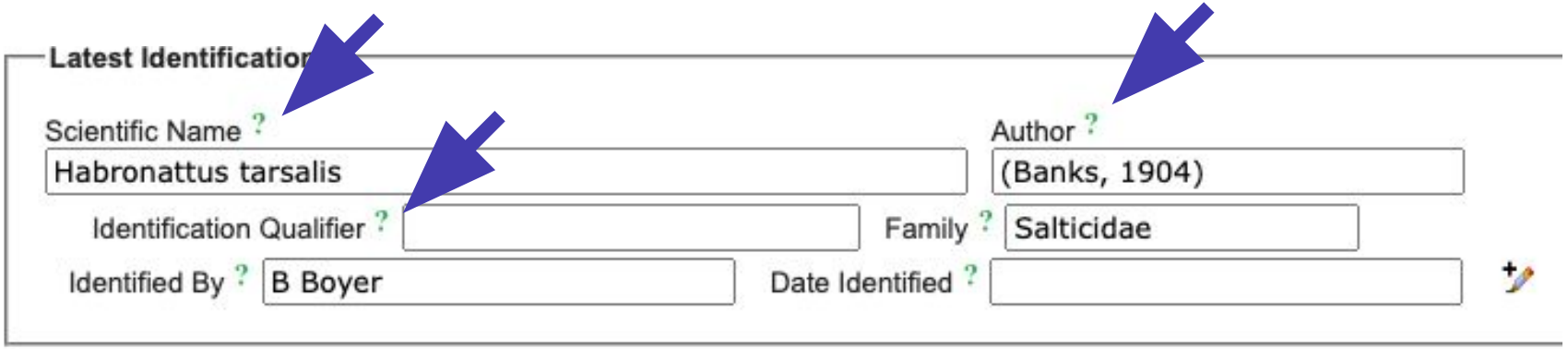
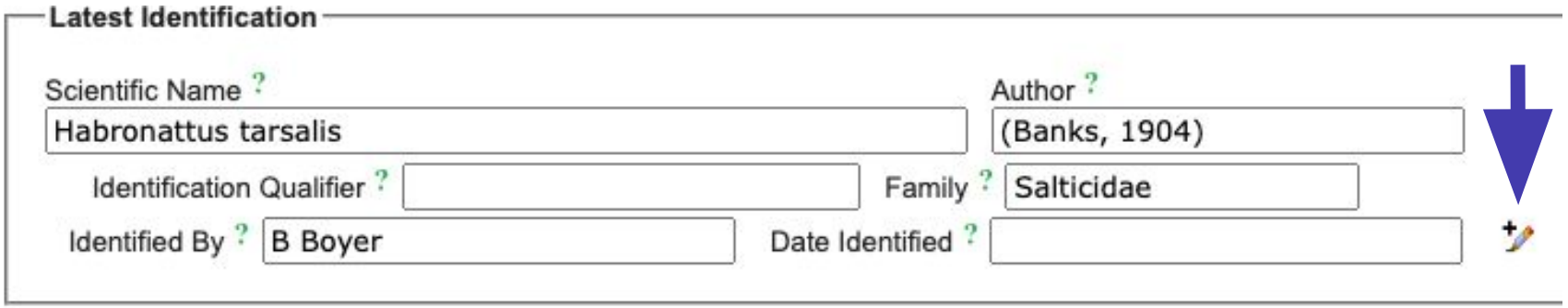


Navigation

Most fields in Symbiota are **Darwin Core** (“DwC”) compliant

Look for the **pencil icons** to expand the form to see **more fields**!



Data Entry Methods

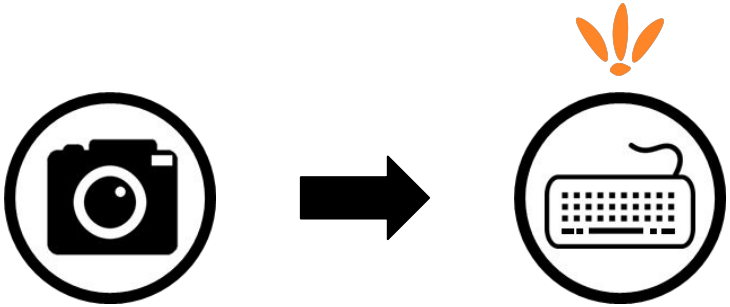
In Symbiota:

1. Direct label transcription
2. Bulk data ingestion

Data Entry Methods

In Symbiota:

1. Direct label transcription
    a. **Image > transcribe (today's demo)**
2. Bulk data ingestion



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  - **Data Entry Basics**
  - Demonstration
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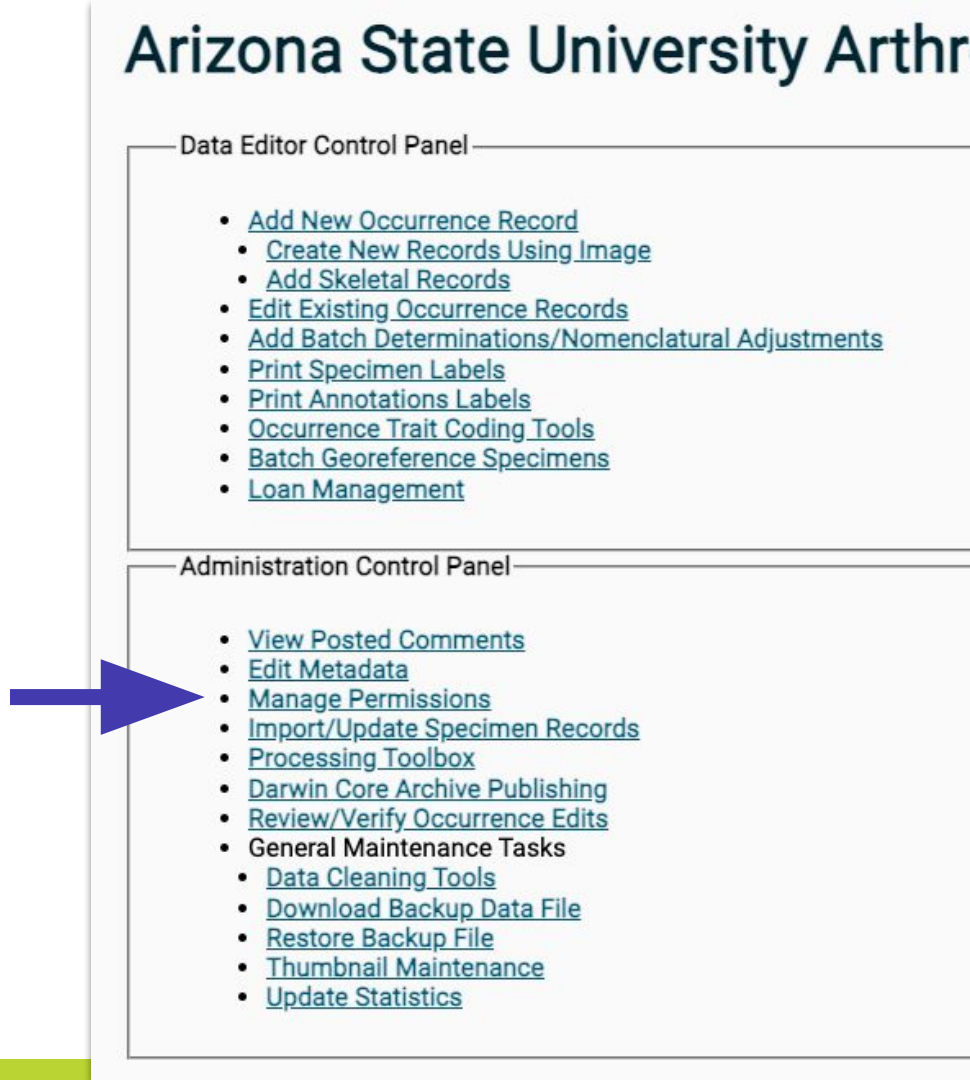
Data Entry Permissions

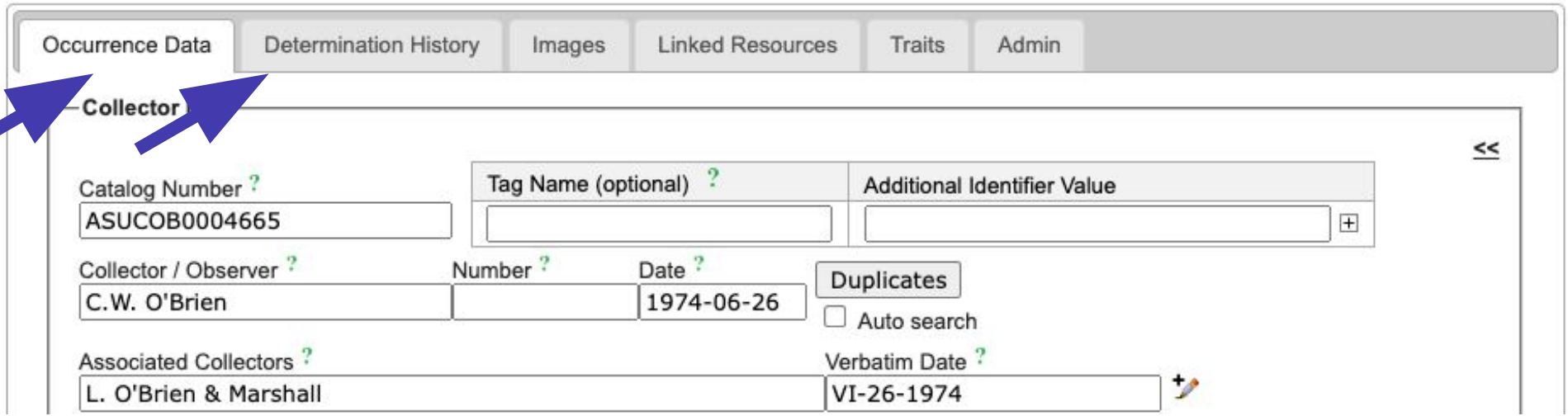
Only users with “**Administrator**” or “**Editor**” permissions can add/edit records

- No one can bulk delete records (ask SSH for help)

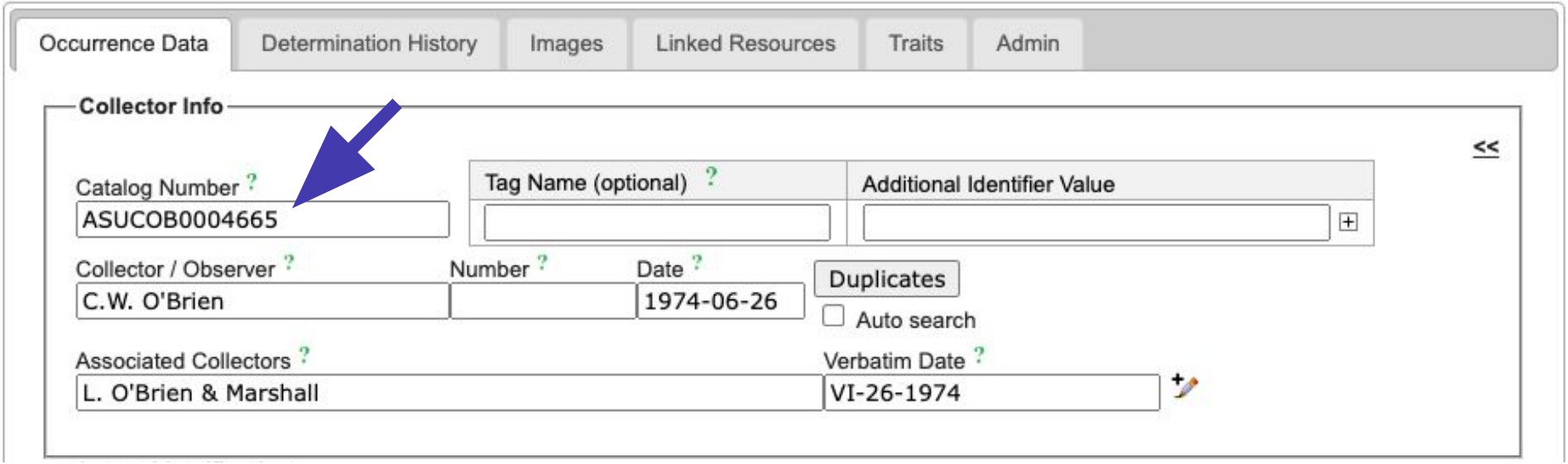


Data Entry

Today: **Occurrence Data** & **Determination History** tabs



Data Entry

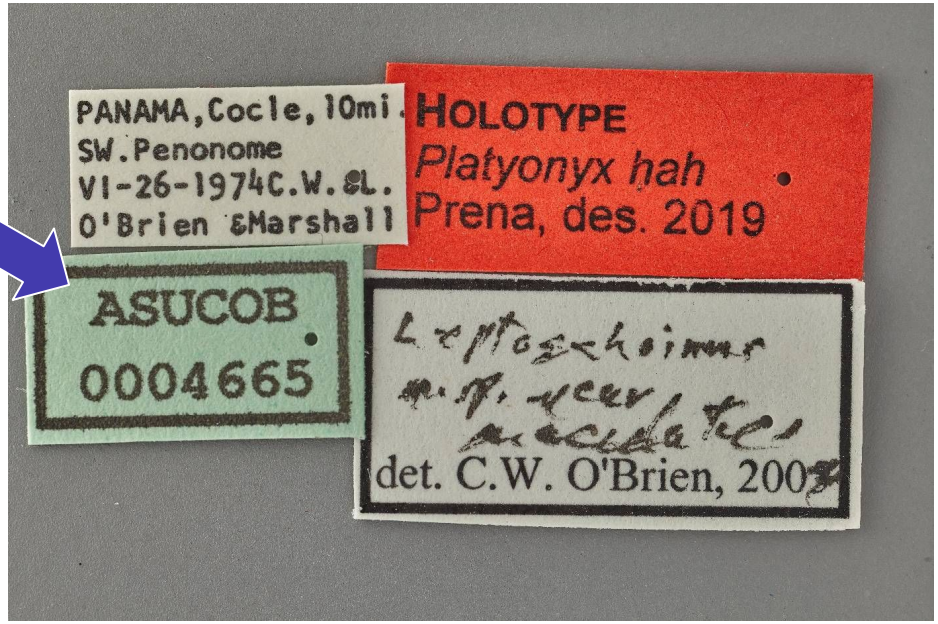


#1 Rule

Every record must have a ***Catalog Number*** value

- Recommended format = “Code########”, e.g. “ASUCOB0004665” (no spaces)
- All other fields are optional, though many are strongly recommended

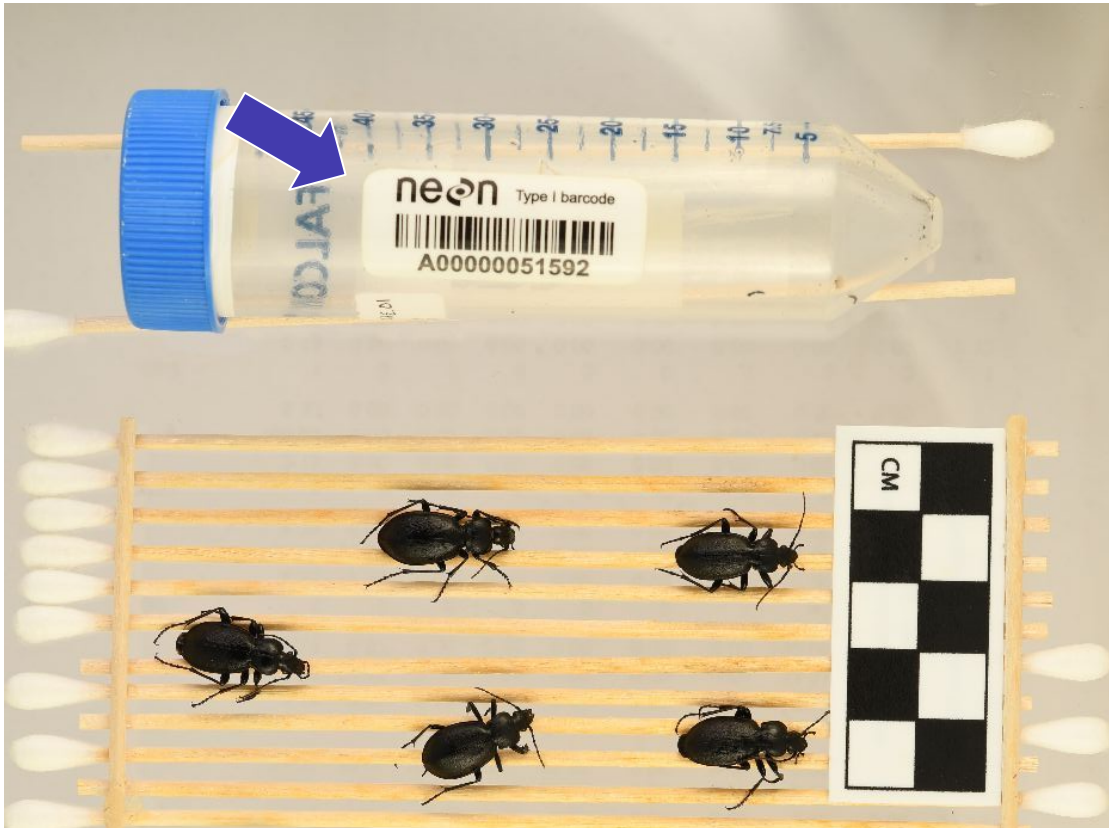
Catalog Numbers



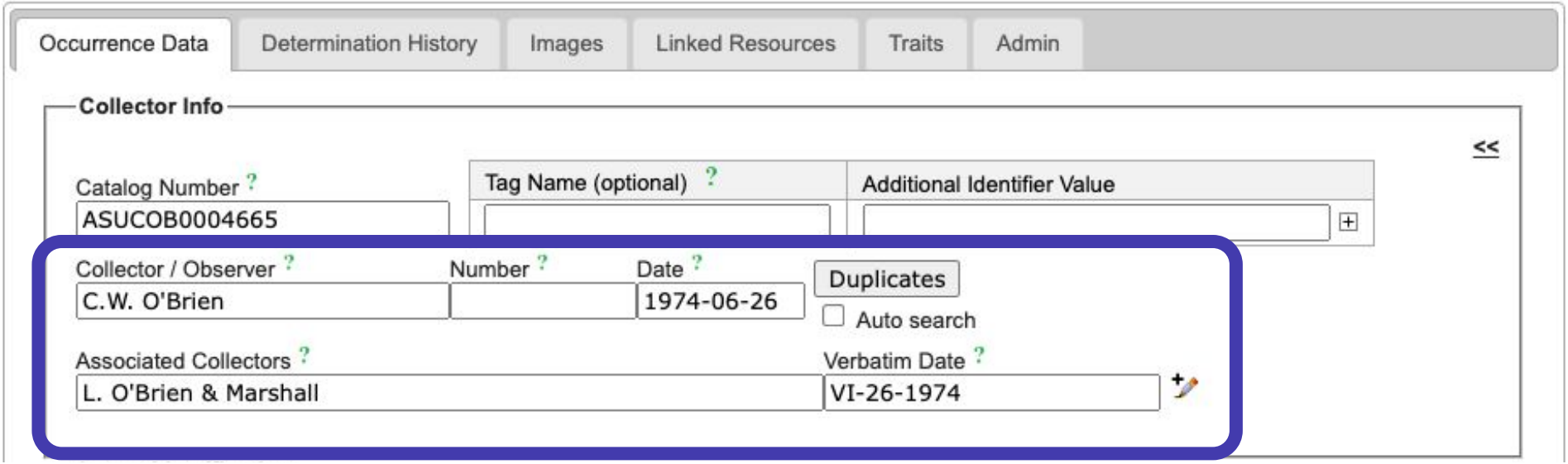
Every record must have a *Catalog Number* value

- Critically, this number must also **accompany** the **physical specimen**

Catalog Numbers



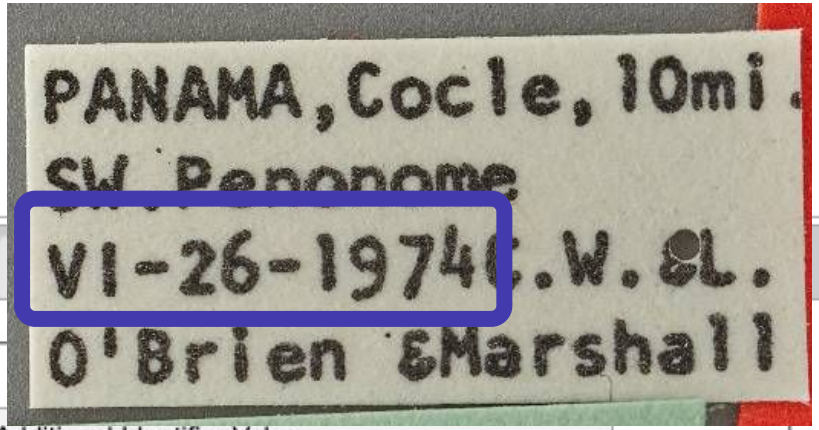
Data Entry



Collector Info

- Parsed by name(s) and dates

Data Entry: Collector Info



Occurrence Data | Determination History | Images | Linked Resources

Collector Info

Catalog Number	Tag Name (optional)	Additional Identifier Value
ASUCOB0004665		

Collector / Observer	Number	Date	Duplicates
C.W. O'Brien		1974-06-26	Auto search

Associated Collectors	Verbatim Date
L. O'Brien & Marshall	VI-26-1974

Collector Info

- Parsed by name(s) and dates, including ***Verbatim Date***

Data Entry

Latest Identification

Scientific Name ? Platyonyx hah

Author ? Prena, 2019

Identification Qualifier ?

Family ?

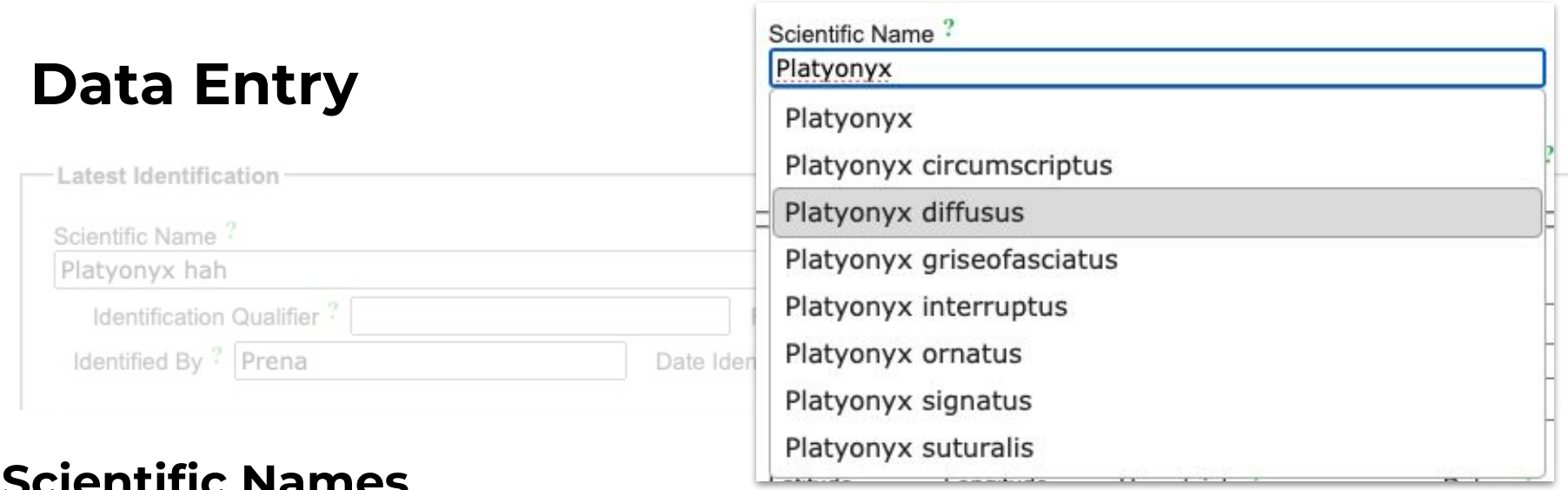
Identified By ? Prena

Date Identified ? 2019

Scientific Names

- Can be entered on this form or the **Determination History** tab

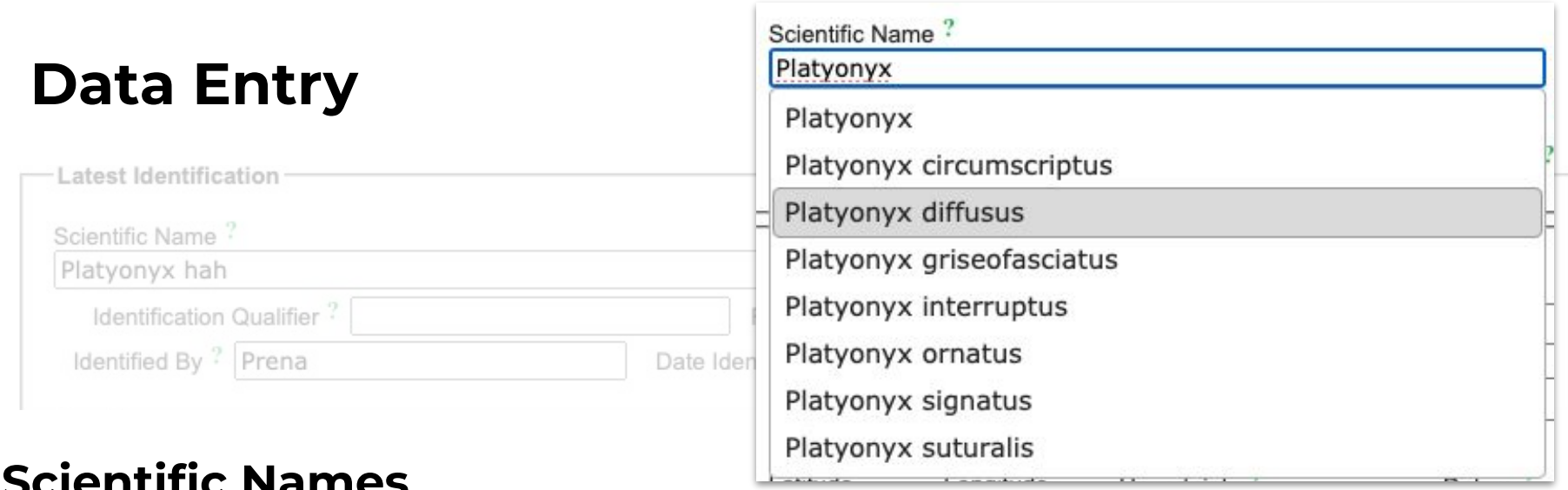
Data Entry



Scientific Names

- Can be entered on this form or the Determination History tab
- Links to the portal's central **taxonomic thesaurus**
  - Begin typing to select a name from the dropdown

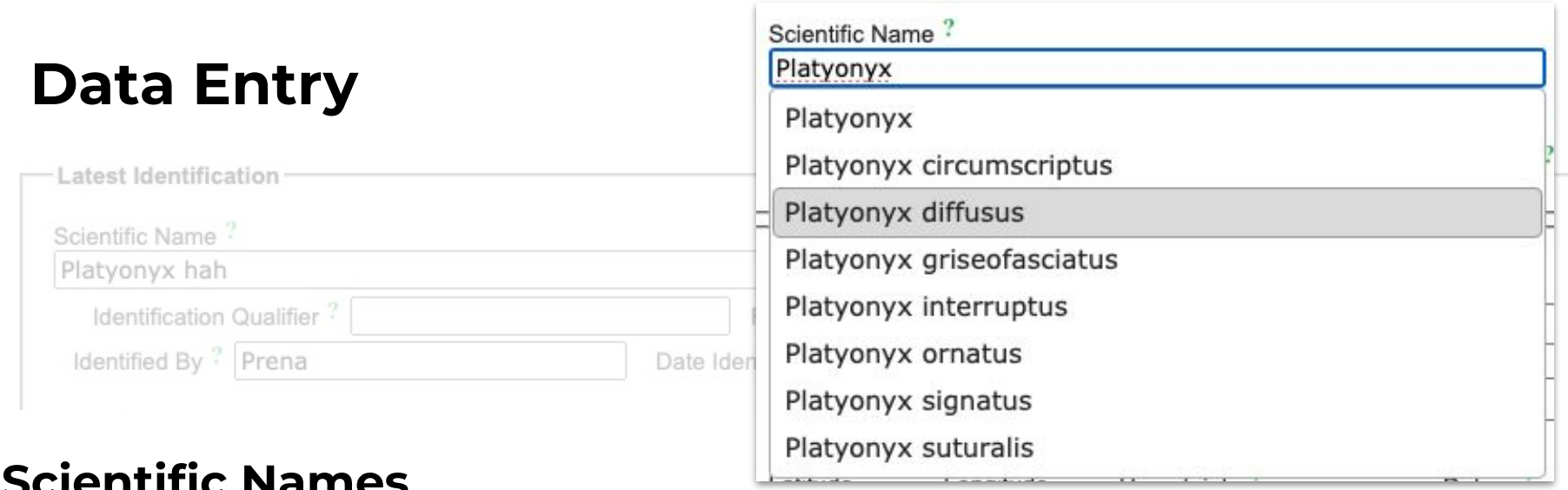
Data Entry



Scientific Names

- Can be entered on this form or the Determination History tab
- Links to the portal's central taxonomic thesaurus
  - If a name does not appear, it's not in the thesaurus (yet)
  - Best to use names in the thesaurus for **quality control**

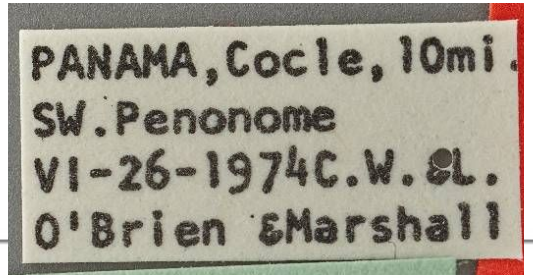
Data Entry



Scientific Names

- Can be entered on this form or the Determination History tab
- Links to the portal's central taxonomic thesaurus
- For the records to be **fully searchable**, the name must be in the thesaurus → ***More on how to add names next week!***

Data Entry



Locality

Country ? Panama

State/Province ? Cocle

County ?

Municipality ?

Location ID ?

Locality ? 10 mi. SW Penonome

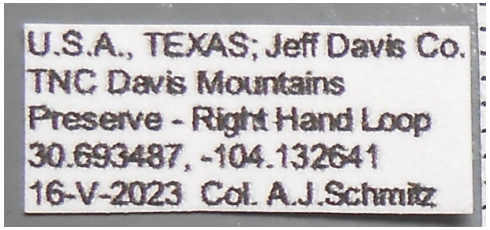
Security: Security not applied ?

Deactivate Locality Lookup

Locality Data

- Enter all information possible
  - *Country*, *State/Province*, *Locality*, etc.
- *Locality* = verbatim (including abbreviations)
- Additional information from field notes can be added later on

Data Entry



Latitude: 30.693487 | Longitude: -104.132641 | Uncertainty | C | F | Datum: WGS84 | << | Verbatim Coordinates

Elevation in Meters - << Verbatim Elevation | Depth in Meters - Verbatim Depth

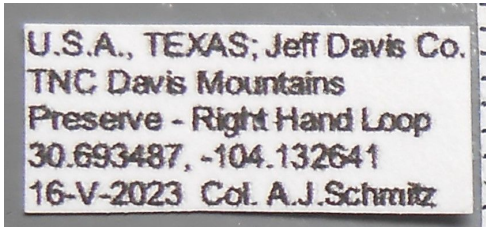
Georeferenced By | Georeference Sources: Label data | Georeference Remarks

Georeference Protocol | Georef Verification Status | Footprint Polygon

Coordinates/Georeferences

- Enter all information possible
  - Use *Verbatim Coordinates* to convert to decimal degrees
  - Example from ASU: https://ecdysis.org/collections/individual/index.php?occid=613913

Data Entry



Latitude: 30.693487 | Longitude: -104.132641 | Uncertainty | C | F | Datum: WGS84 | << | Verbatim Coordinates

Elevation in Meters: - | << | Verbatim Elevation | Depth in Meters: - | Verbatim Depth

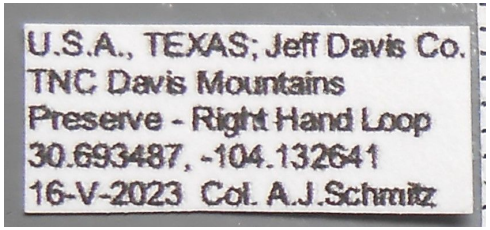
Georeferenced By | Georeference Sources: Label data | Georeference Remarks

Georeference Protocol | Georef Verification Status | Footprint Polygon

Coordinates/Georeferences

- Enter all information possible
  - Use *Verbatim Coordinates* to convert to decimal degrees
  - **DMS**, **UTM**, and **TRS** fields available → “**F**” button

Data Entry



Latitude: 30.693487 | Longitude: -104.132641 | Uncertainty | C | F | Datum: WGS84 | << | Verbatim Coordinates

Elevation in Meters | - | << | Verbatim Elevation | Depth in Meters | - | Verbatim Depth

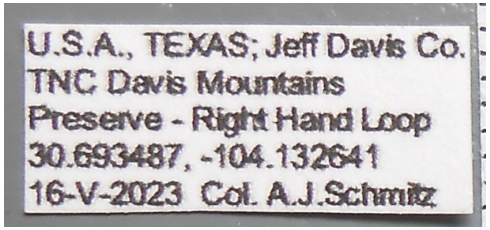
Georeferenced By | Georeference Sources: Label data | Georeference Remarks

Georeference Protocol | Georef Verification Status | Footprint Polygon

Coordinates/Georeferences

- Enter all information possible
  - Use *Verbatim Coordinates* to convert to decimal degrees
  - DMS, UTM, and TRS fields available → “F” button
  - Or use GeoLocate → **globe/swirl** icons to add coordinates

Data Entry



Latitude: 30.693487 | Longitude: -104.132641 | Uncertainty | C | F | Datum: WGS84 | << | Verbatim Coordinates

Elevation in Meters | - | << | Verbatim Elevation | Depth in Meters | - | Verbatim Depth

Georeferenced By | Georeference Sources: Label data | Georeference Remarks

Georeference Protocol | Georef Verification Status | Footprint Polygon

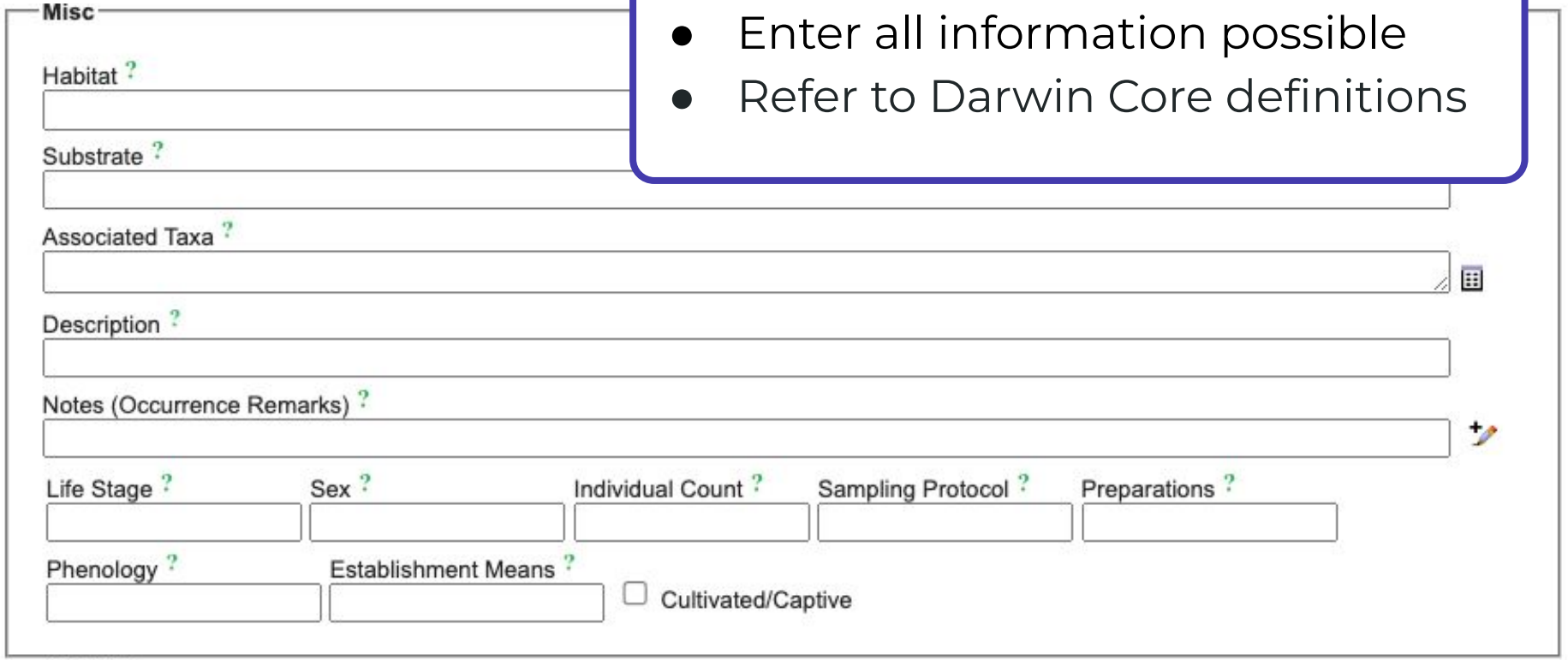
Coordinates/Georeferences

- Georeferencing Metadata
  - Who determined the coordinates?
  - Where did the coordinates originate? (label? handheld GPS?)
- Best practices/recommendations for many fields need to be defined

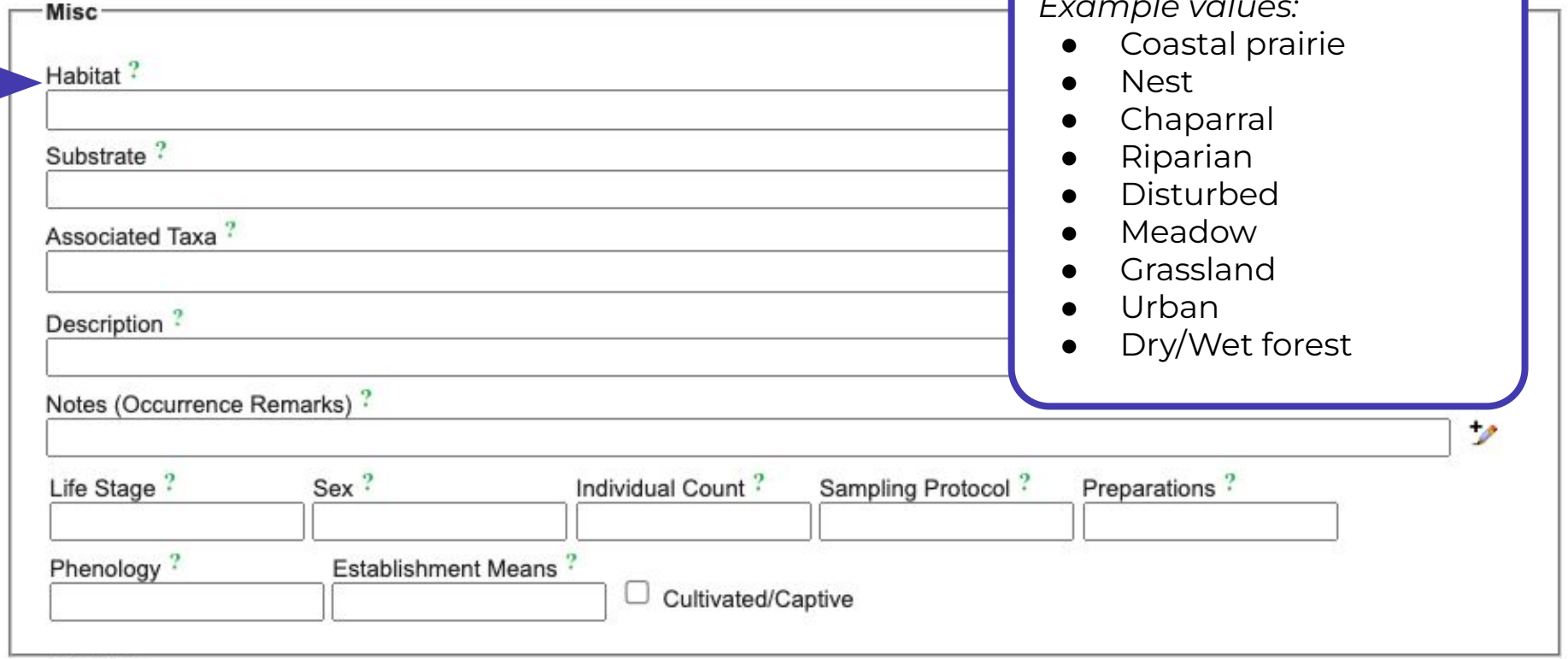
Data Entry

“Misc” Fields

- Enter all information possible
- Refer to Darwin Core definitions



Data Entry

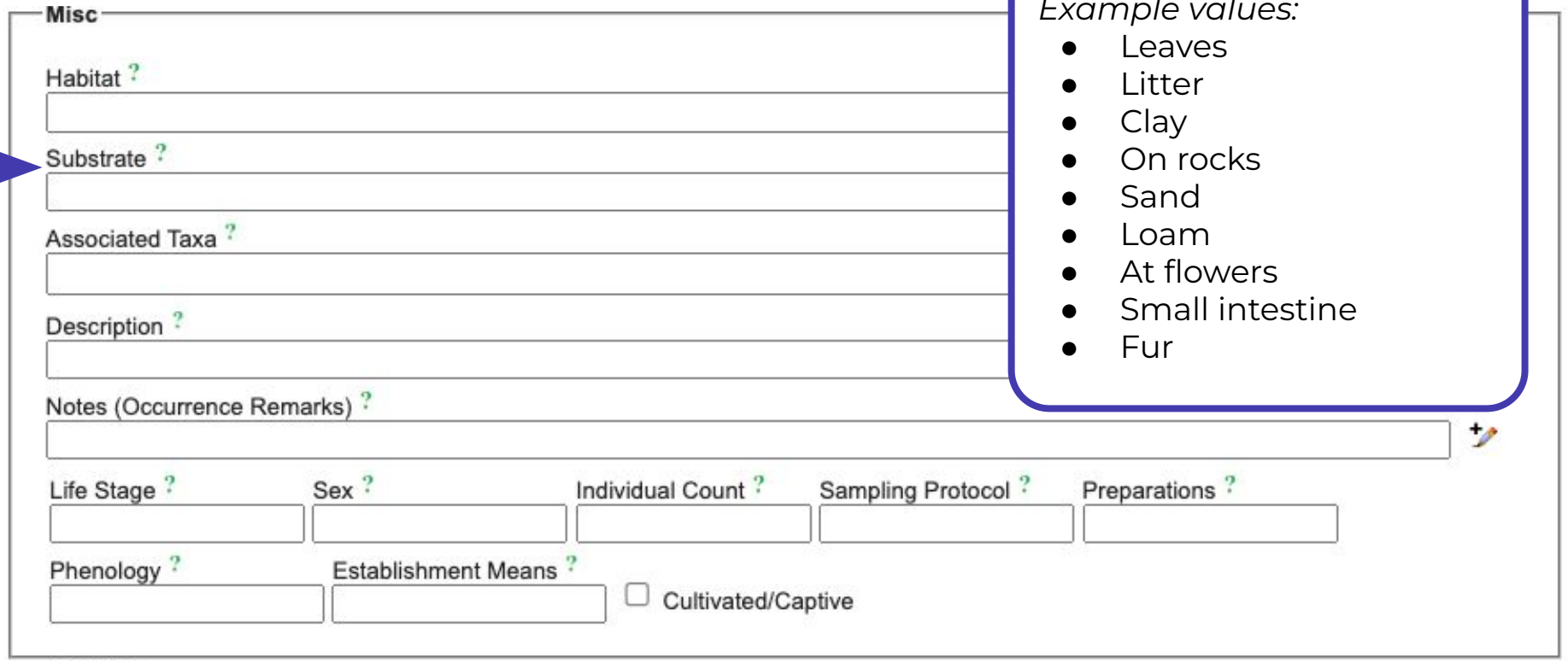


Habitat

Example values:

- Coastal prairie
- Nest
- Chaparral
- Riparian
- Disturbed
- Meadow
- Grassland
- Urban
- Dry/Wet forest

Data Entry

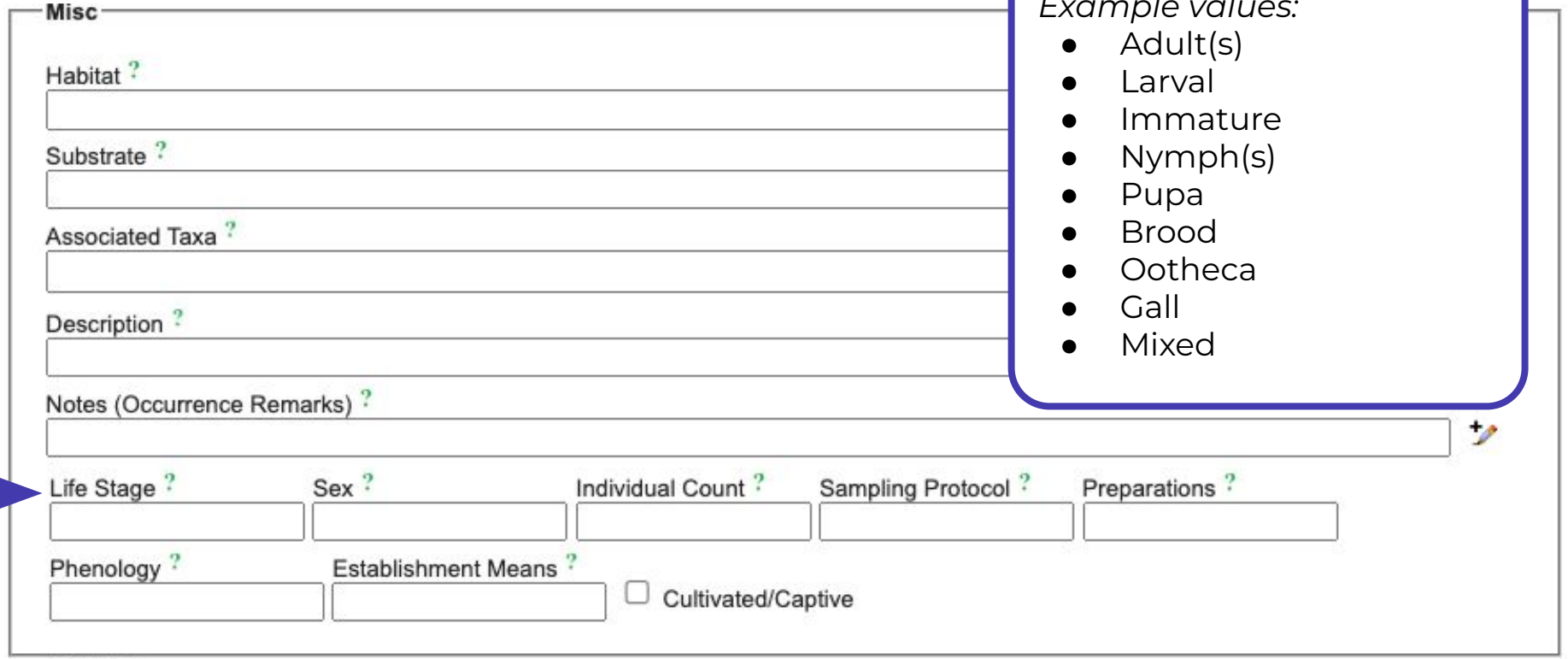


Substrate

Example values:

- Leaves
- Litter
- Clay
- On rocks
- Sand
- Loam
- At flowers
- Small intestine
- Fur

Data Entry

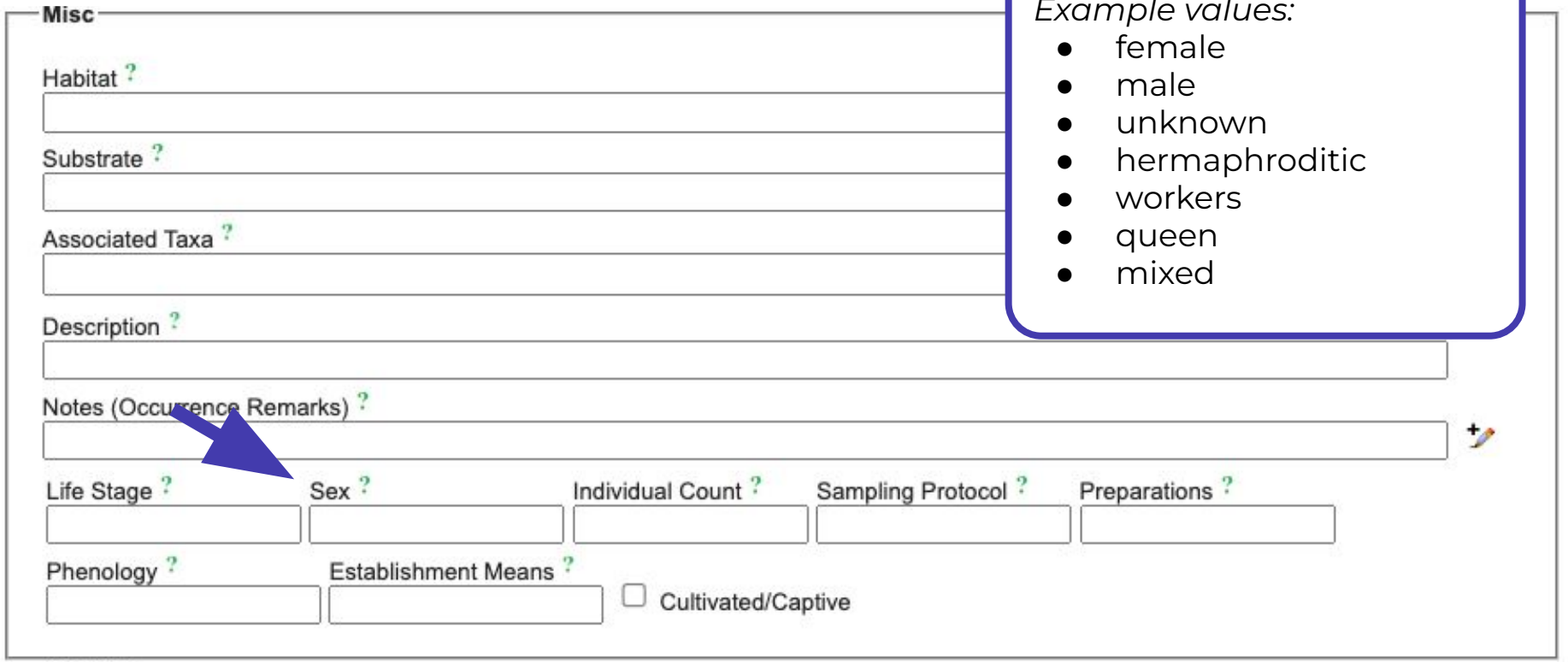


Life Stage

Example values:

- Adult(s)
- Larval
- Immature
- Nymph(s)
- Pupa
- Brood
- Ootheca
- Gall
- Mixed

Data Entry

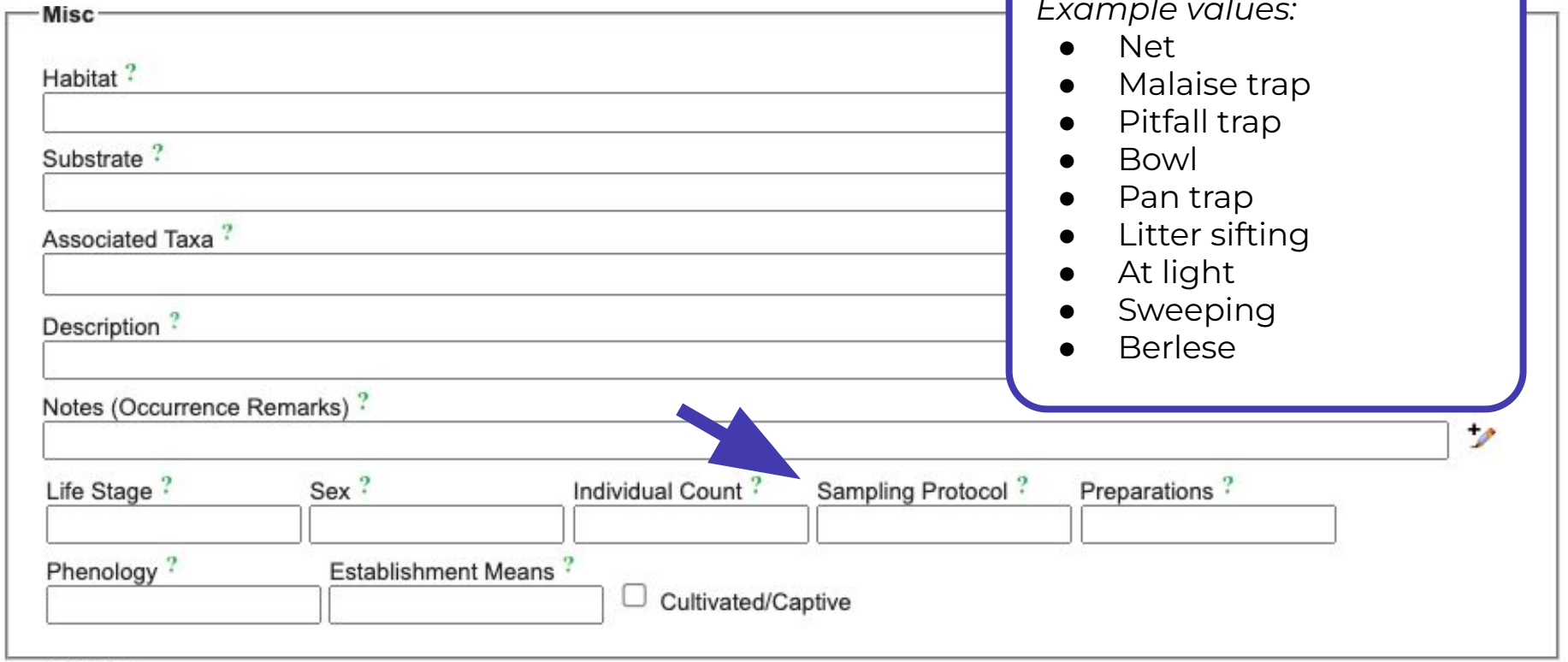


Sex

Example values:

- female
- male
- unknown
- hermaphroditic
- workers
- queen
- mixed

Data Entry

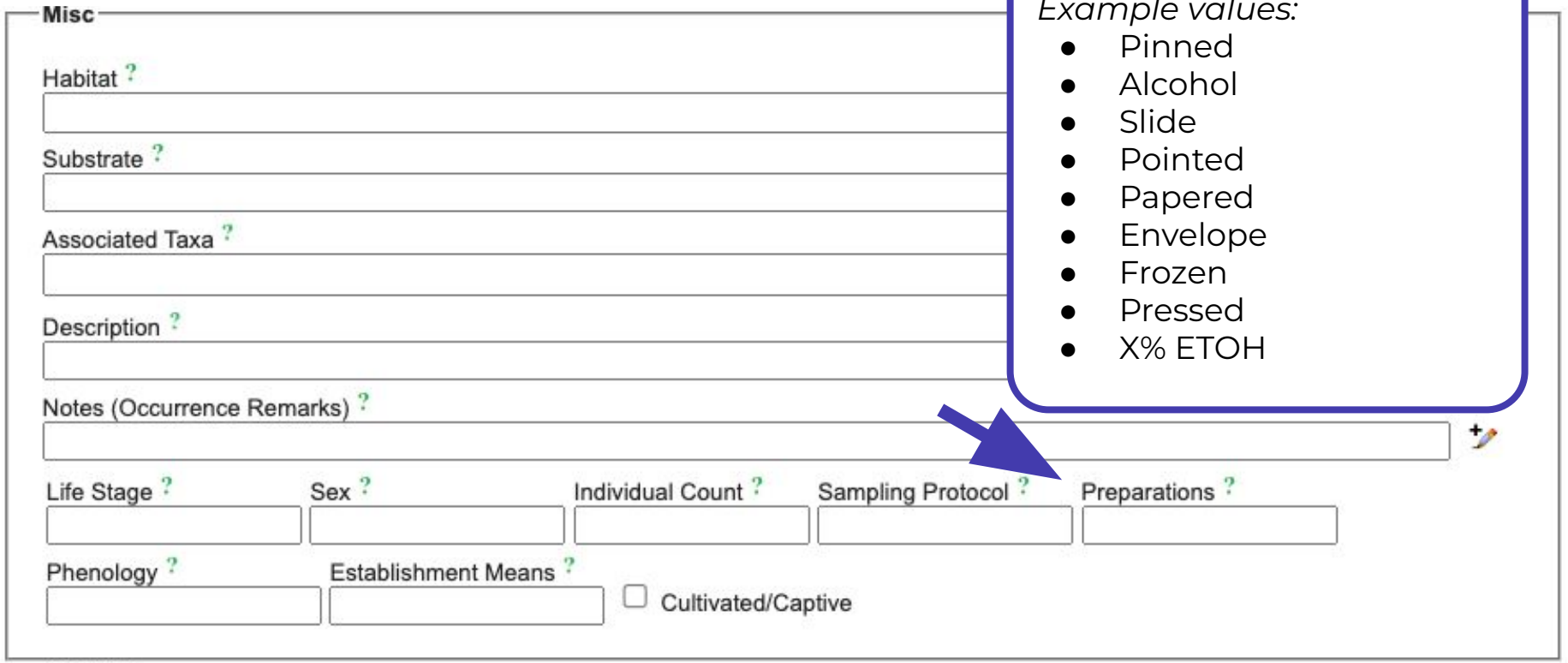


Sampling Protocol

Example values:

- Net
- Malaise trap
- Pitfall trap
- Bowl
- Pan trap
- Litter sifting
- At light
- Sweeping
- Berlese

Data Entry

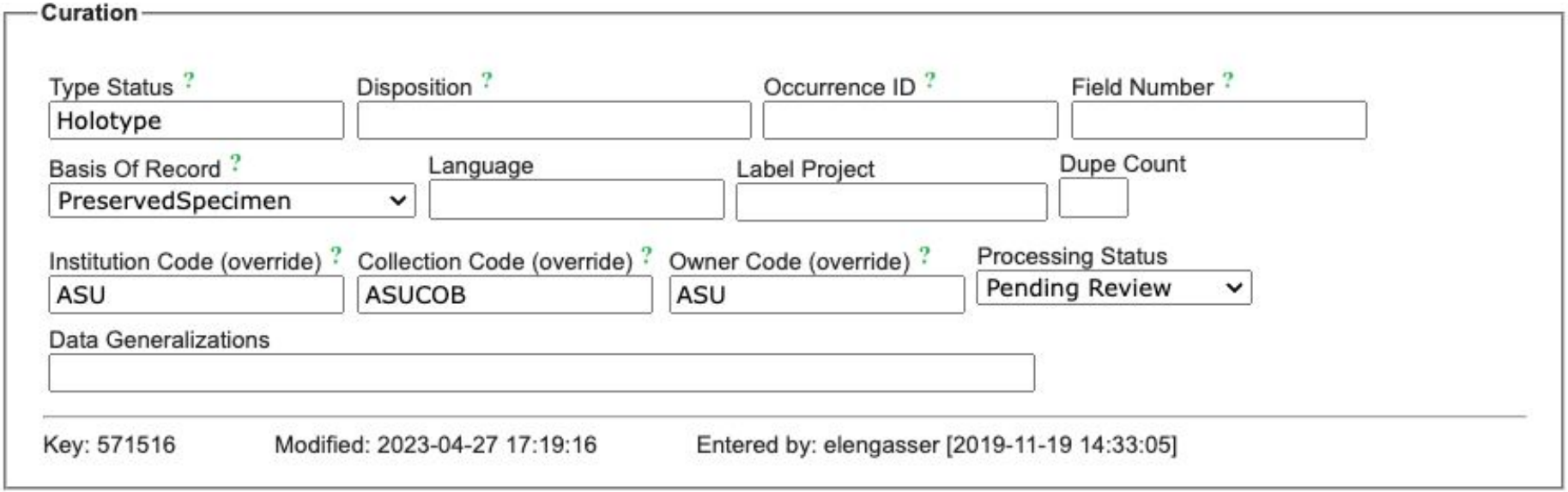


Preparations

Example values:

- Pinned
- Alcohol
- Slide
- Pointed
- Papered
- Envelope
- Frozen
- Pressed
- X% ETOH

Data Entry



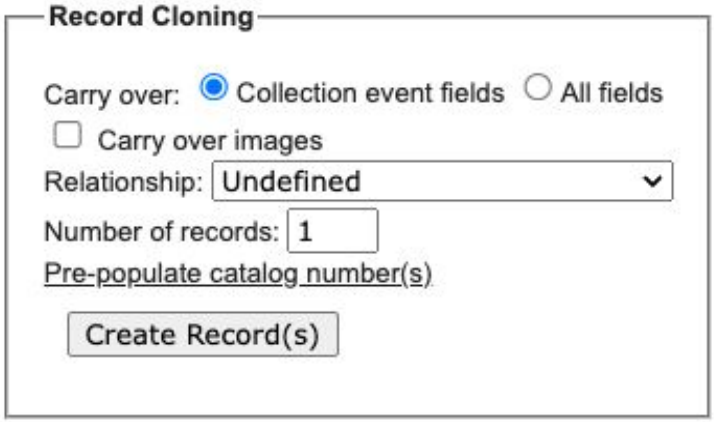
Curation

- Enter all information possible
  - *Type Status*

Data Entry

Record Cloning

- Use to expedite cataloging

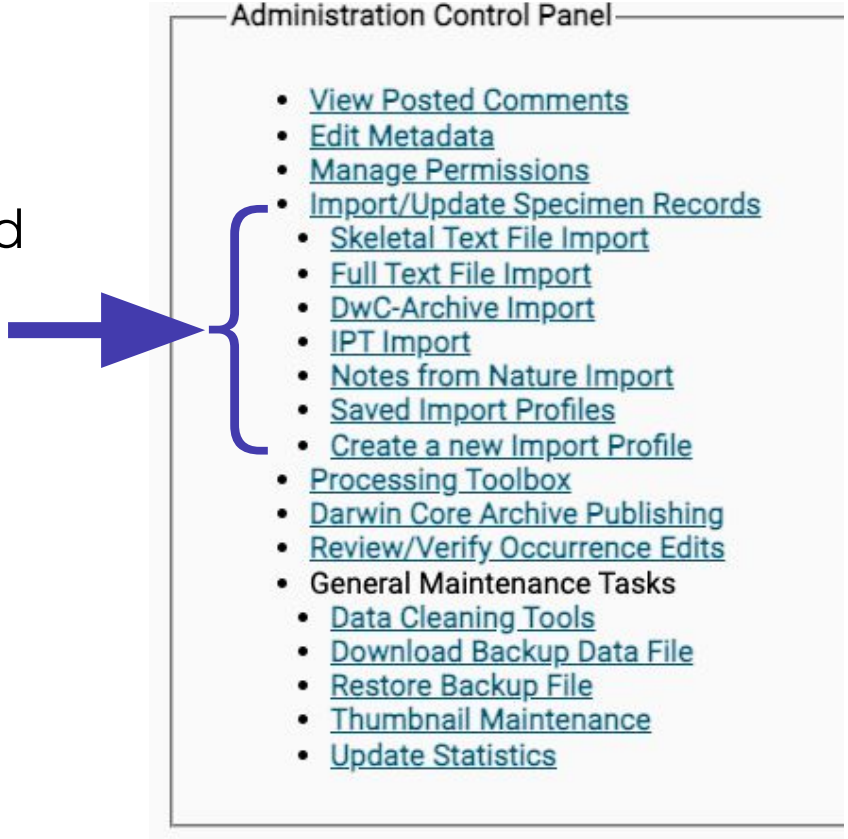


Demo

Data Entry

Bulk Data Ingestion

- Can also spreadsheet catalog and bulk ingest data through the **Specimen Uploader**
  - All of the same fields and guidelines apply!
  - Webinar on this topic: https://youtu.be/zrwHIDtae-c



Reminder

Images in Ecdysis

- Any images uploaded to the portal should be “web ready” (<10 MB JPEGs)
  - Smaller is better for web display
- A **thorough review of this topic** was presented during last week’s Symbiota Support Group meeting. Recording: https://youtu.be/m1HHN4g4NGg?si=JTS5e1BFEZM70PjO

Ecdysis Portal Campaign

Office Hours - February 20, 2024

iDigBio
Integrated Digitized Biocollections

Symbiota

Announcement

- **Data quality workshop** at the Digital Data in Biodiversity Research Conference (May 28-31, Lawrence, KS)
  - Applications for **participant support** due February 26
  - symbiota.org/dd-2024-workshop

Agenda

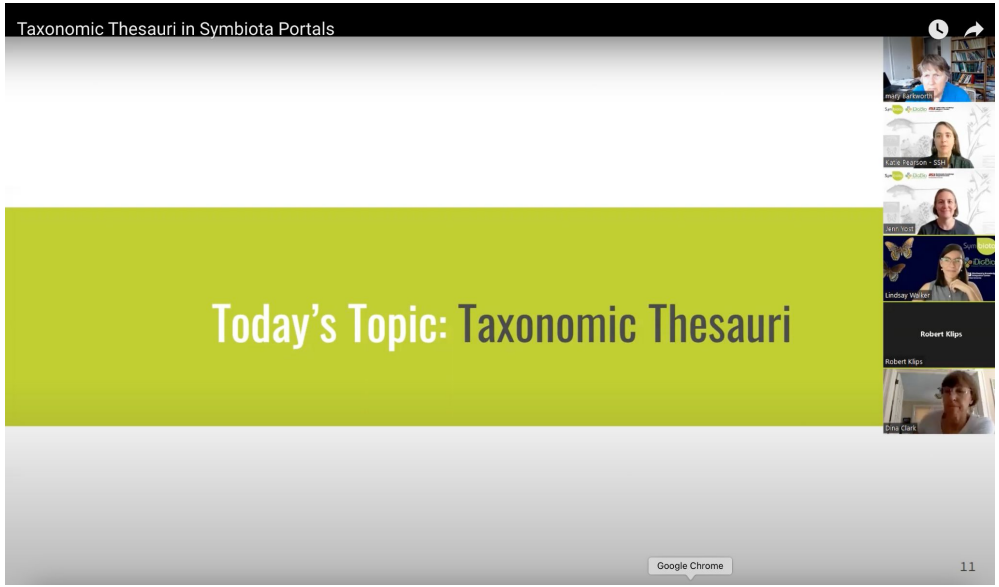
- Introduction to the Taxonomic Thesaurus
- Taxonomic thesaurus editing
  - Adding New Taxa
  - Editing Existing Taxa
- Taxon profiles

Agenda

- **Introduction to the Taxonomic Thesaurus**
- Taxonomic thesaurus editing
  - Adding New Taxa
  - Editing Existing Taxa
- Taxon profiles

Introduction to the Taxonomic Thesaurus

We also recommend this recording: https://youtu.be/ipSIXOHud8A



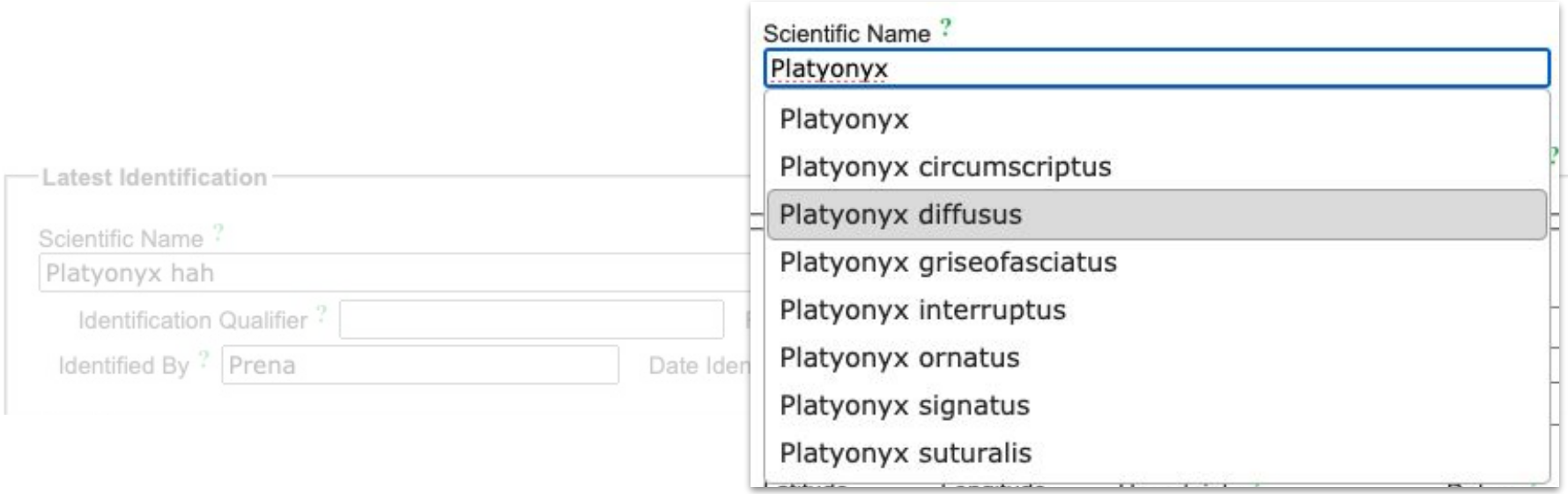
Who can add/edit taxonomy in Ecdysis?

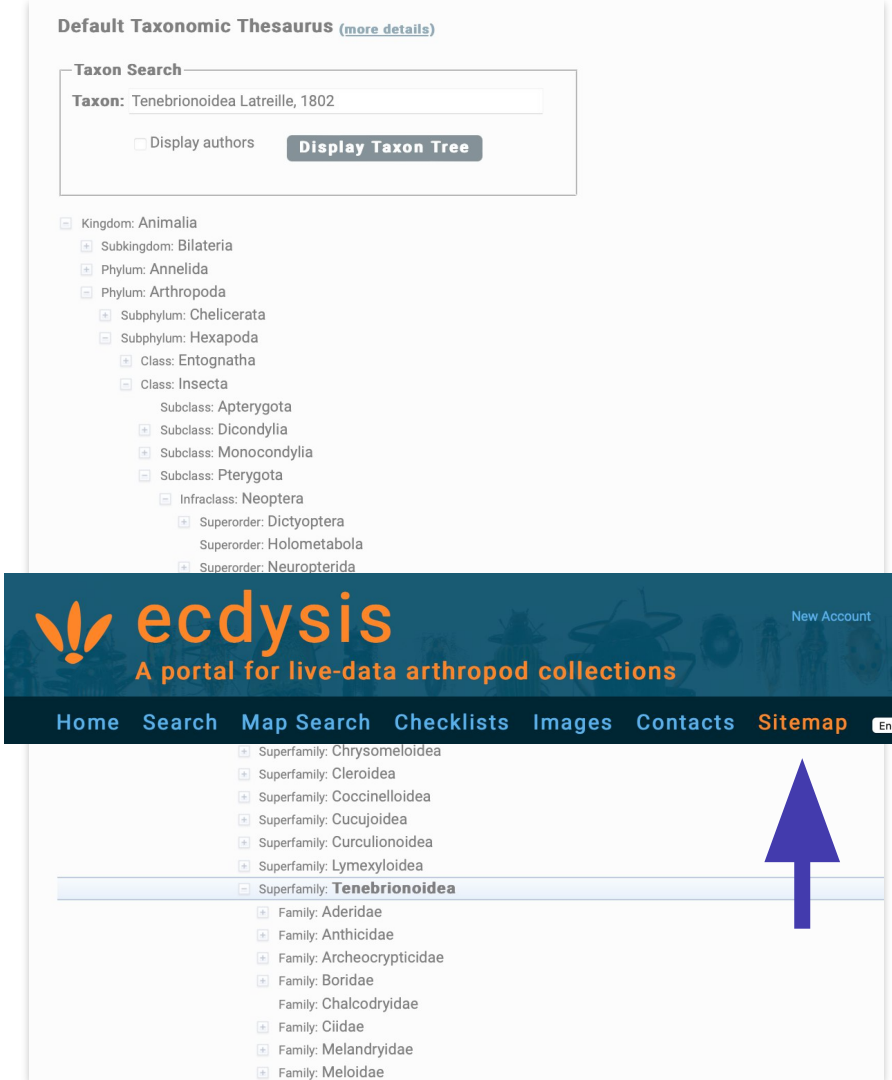
Ecdysis **Collections Administrators** can request Taxonomy Editor permissions

- Admins can add their Ecdysis username to this sheet to request permissions: bit.ly/ecdysis-taxonomy
    - After the campaign, email help@symbiota.org to receive Taxonomy permissions.

Why add/edit taxonomy in Ecdysis?

- Increases the searchability/visibility of your specimen records in the portal
- Enables use of thesaurus during cataloging





Introduction to the Taxonomic Thesaurus

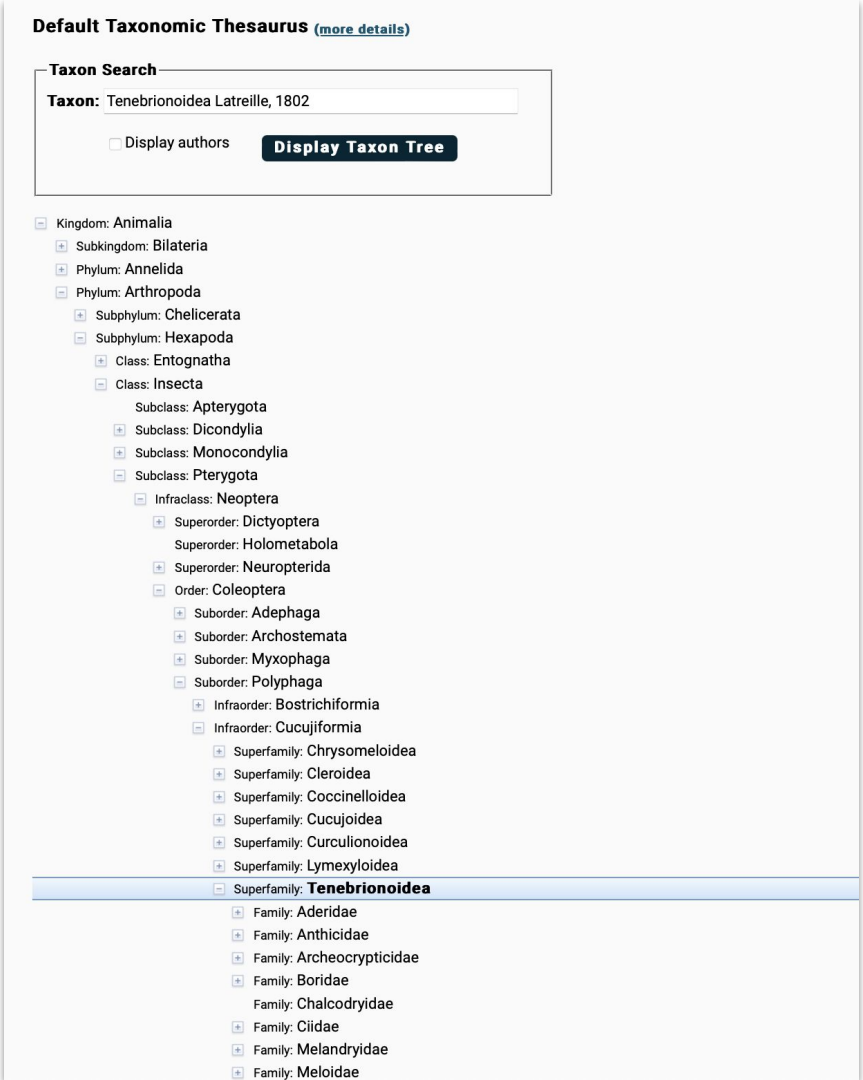
Anyone can view the thesaurus by navigating to:

Sitemap >

Additional Resources >

Taxonomic Tree Viewer
or **Taxonomy Explorer**

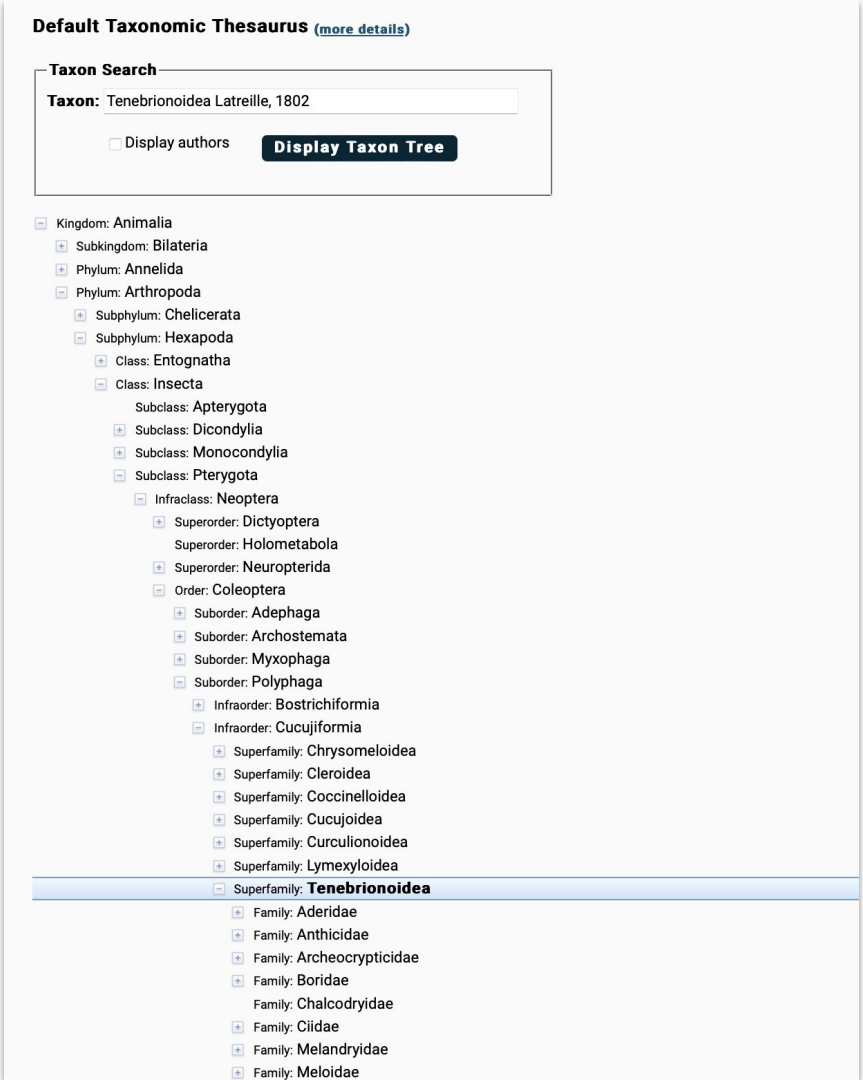
https://ecdysis.org/taxa/taxonomy/taxonomydynamicdisplay.php



Introduction to the Taxonomic Thesaurus

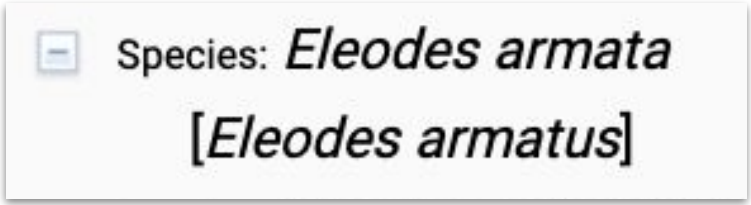
- Hierarchical list of names

https://ecdysis.org/taxa/taxonomy/taxonomydynamicdisplay.php

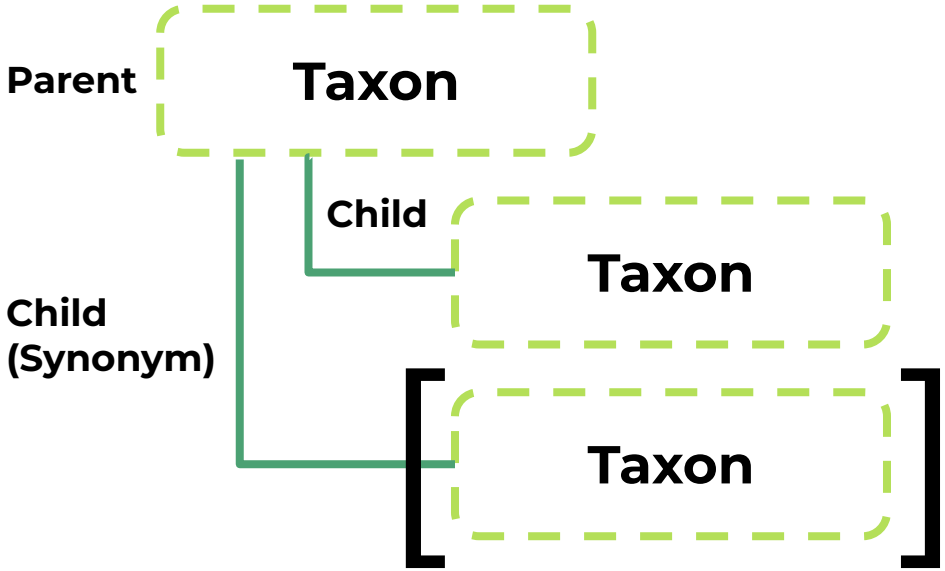


Introduction to the Taxonomic Thesaurus

- Hierarchical list of names
- Accepted & unaccepted taxa
  - **Synonyms** enclosed in [brackets]

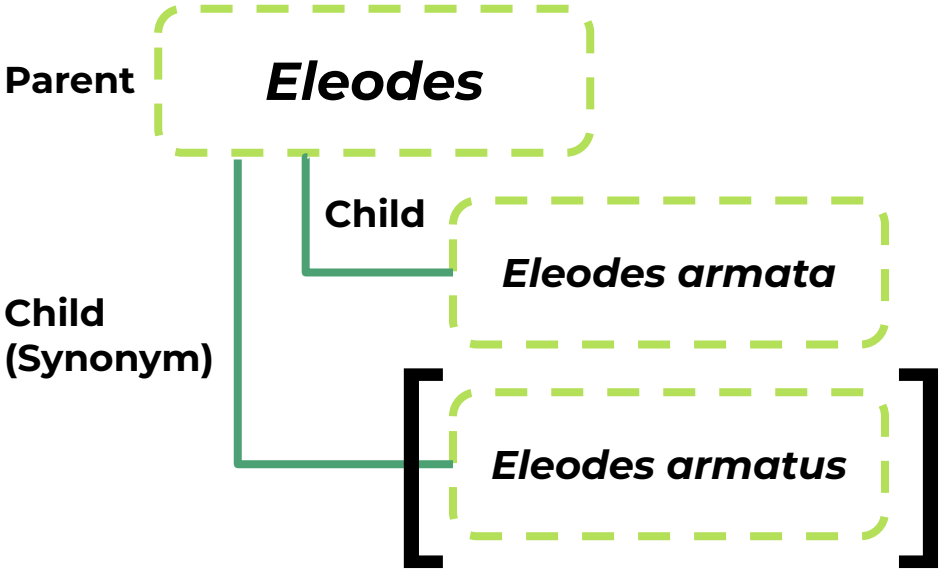


https://ecdysis.org/taxa/taxonomy/taxonomydynamicdisplay.php



Introduction to the Taxonomic Thesaurus

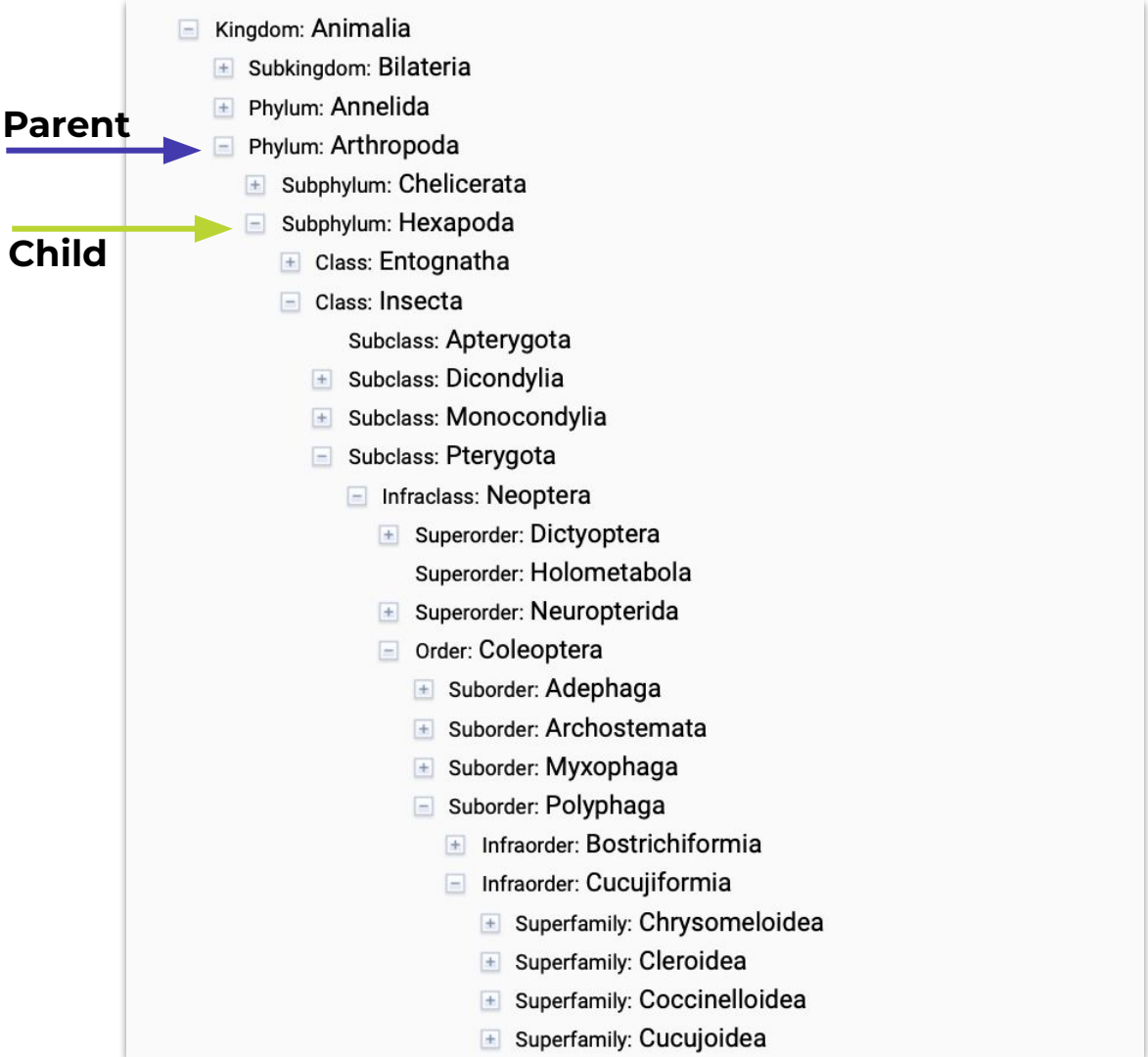
- Hierarchical list of names
- Accepted & unaccepted taxa
- **Parent-child relationships**



Introduction to the Taxonomic Thesaurus

- Hierarchical list of names
- Accepted & unaccepted taxa
- **Parent-child relationships**


Parent
Child
Kingdom: Animalia
Subkingdom: Bilateria
Phylum: Annelida
Phylum: Arthropoda
Subphylum: Chelicerata
Subphylum: Hexapoda
Class: Entognatha
Class: Insecta
Subclass: Apterygota
Subclass: Dicondylia
Subclass: Monocondylia
Subclass: Pterygota
Infraclass: Neoptera
Superorder: Dictyoptera
Superorder: Holometabola
Superorder: Neuropterida
Order: Coleoptera
Suborder: Adephaga
Suborder: Archostemata
Suborder: Myxophaga
Suborder: Polyphaga
Infraorder: Bostrichiformia
Infraorder: Cucujiformia
Superfamily: Chrysomeloidea
Superfamily: Cleroidea
Superfamily: Coccinelloidea
Superfamily: Cucujoidea


Parent
Child
Kingdom: Animalia
Subkingdom: Bilateria
Phylum: Annelida
Phylum: Arthropoda
Subphylum: Chelicerata
Subphylum: Hexapoda
Class: Entognatha
Class: Insecta
Subclass: Apterygota
Subclass: Dicondylia
Subclass: Monocondylia
Subclass: Pterygota
Infraclass: Neoptera
Superorder: Dictyoptera
Superorder: Holometabola
Superorder: Neuropterida
Order: Coleoptera
Suborder: Adephaga
Suborder: Archostemata
Suborder: Myxophaga
Suborder: Polyphaga
Infraorder: Bostrichiformia
Infraorder: Cucujiformia
Superfamily: Chrysomeloidea
Superfamily: Cleroidea
Superfamily: Coccinelloidea
Superfamily: Cucujoidea

Every taxon MUST be linked to a **parent** taxon and an **accepted** taxon.

Taxon name	Parent taxon	Accepted taxon
Eleodes armata	*Eleodes*	*Eleodes armatus*

Every taxon MUST be linked to a **parent** taxon and an **accepted** taxon.

Taxon name	Parent taxon	Accepted taxon
Eleodes armata	*Eleodes*	*Eleodes armatus*

(The accepted taxon can also be itself)

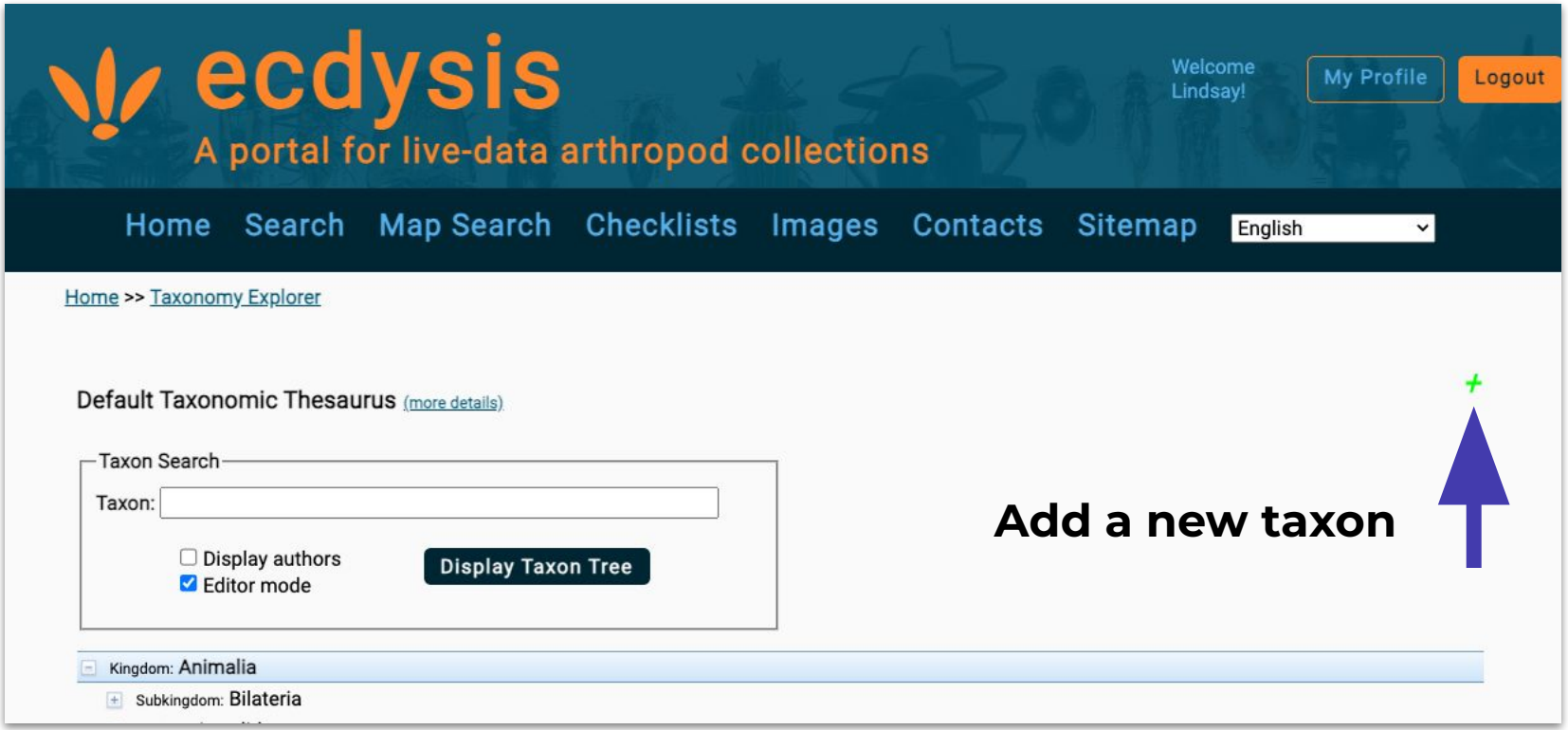
Taxon name	Parent taxon	Accepted taxon
Eleodes armata	*Eleodes*	*Eleodes armata*

❌Changes made in the taxonomic thesaurus will **not** change the taxonomic names of specimens.

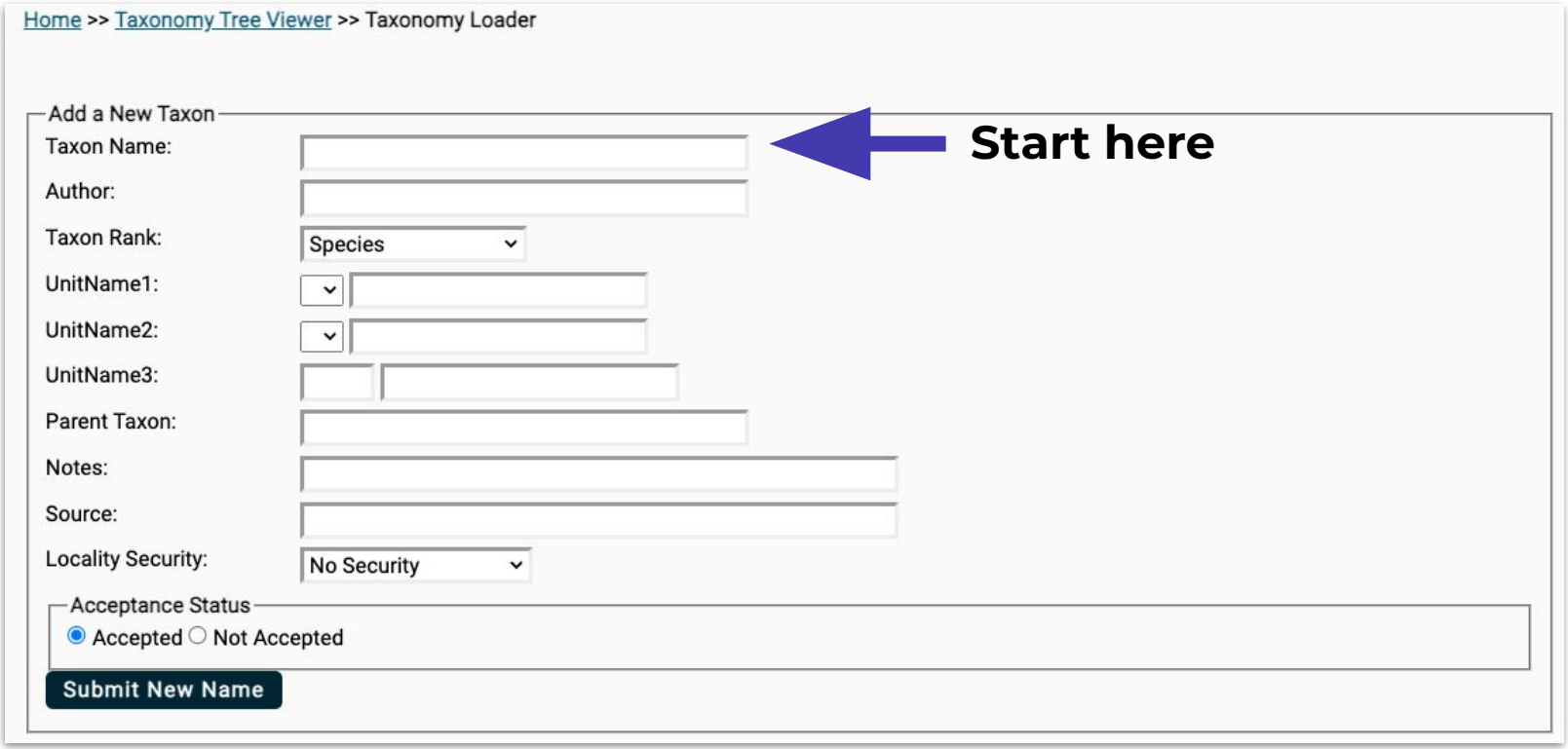
Agenda

- Introduction to the Taxonomic Thesaurus
- **Taxonomic thesaurus editing**
- Taxon profiles

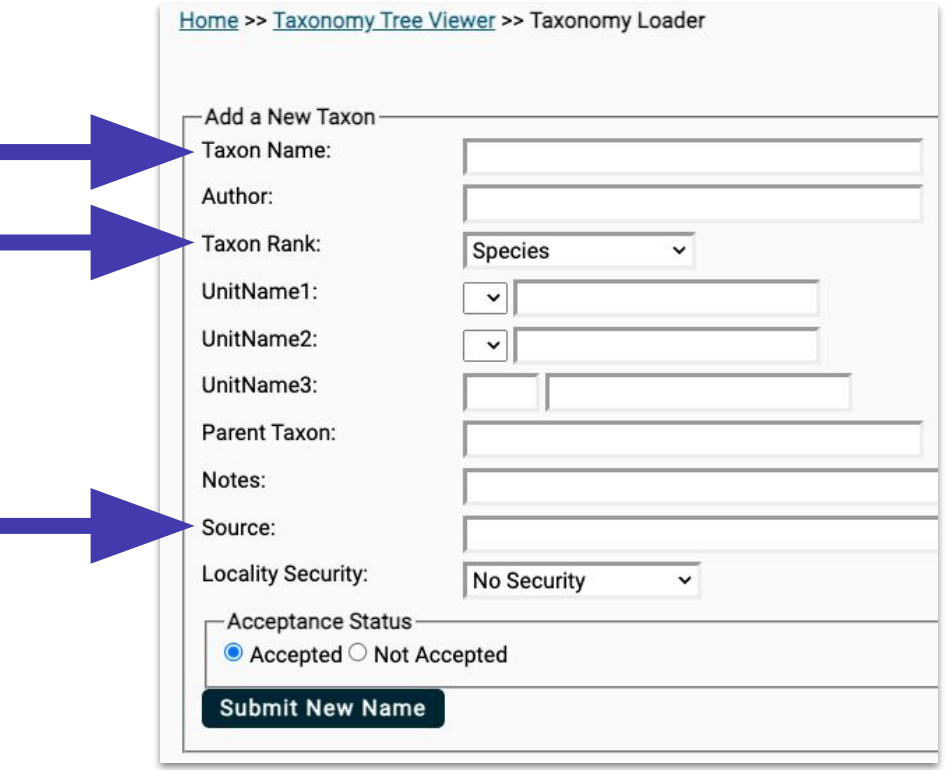
1) Adding new taxa: Taxonomy Explorer



1) Adding new taxa



1) Adding new taxa



1) Start by adding *Taxon Name*

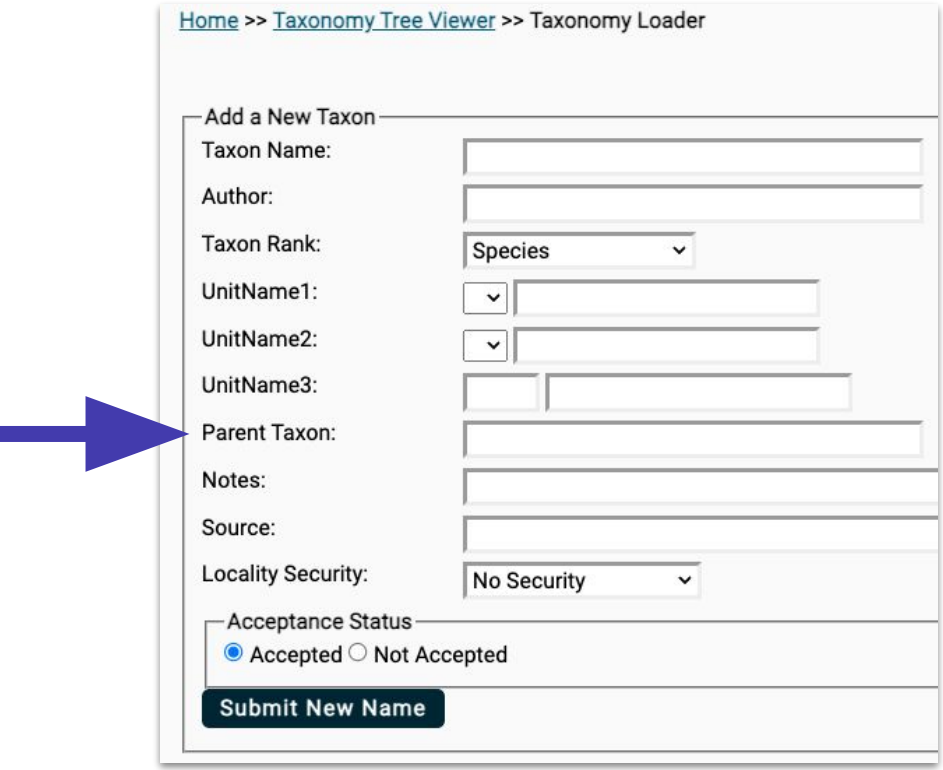
- Include **Author + Year** for **species-level** names

2) Assign *Taxon Rank*

3) Add reference URL in *Source*, if available

https://ecdysis.org/taxa/taxonomy/taxonomyloader.php

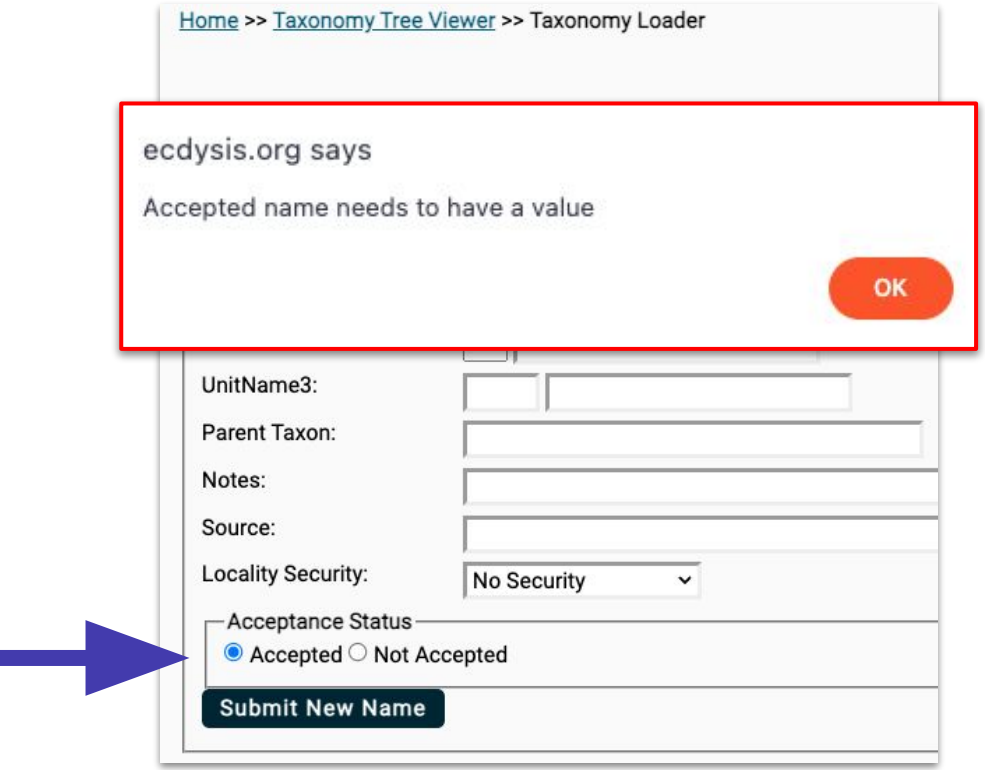
1) Adding new taxa



- **Parent** taxon must exist **first** for the record to save
  - Create the parent taxon record if needed

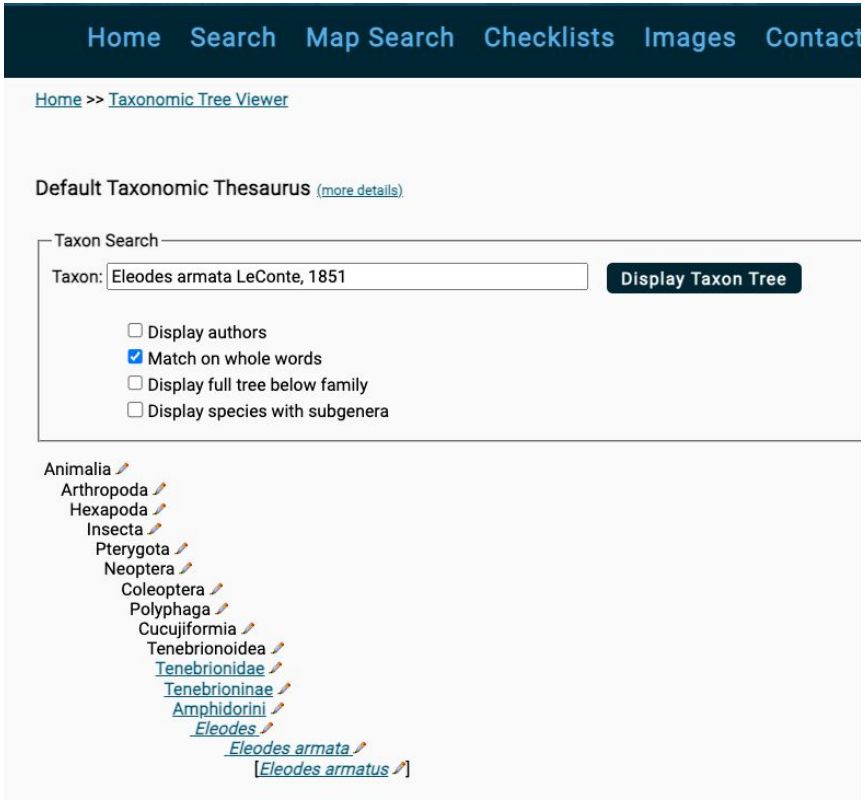
https://ecdysis.org/taxa/taxonomy/taxonomyloader.php

1) Adding new taxa



- Parent taxon must exist first for the record to save
  - Create the parent taxon record if needed
- **Accepted name** must exist **first** if “not accepted”
  - Create the accepted taxon if needed

2) Editing existing taxa: Taxonomy Tree Viewer



1) Navigate to the Tree Viewer

- *Sitemap > Taxonomic Tree Viewer*

2) Search for taxon to edit > ✎ icon

3) Navigate to
- Editor tab
- Taxonomic Status tab

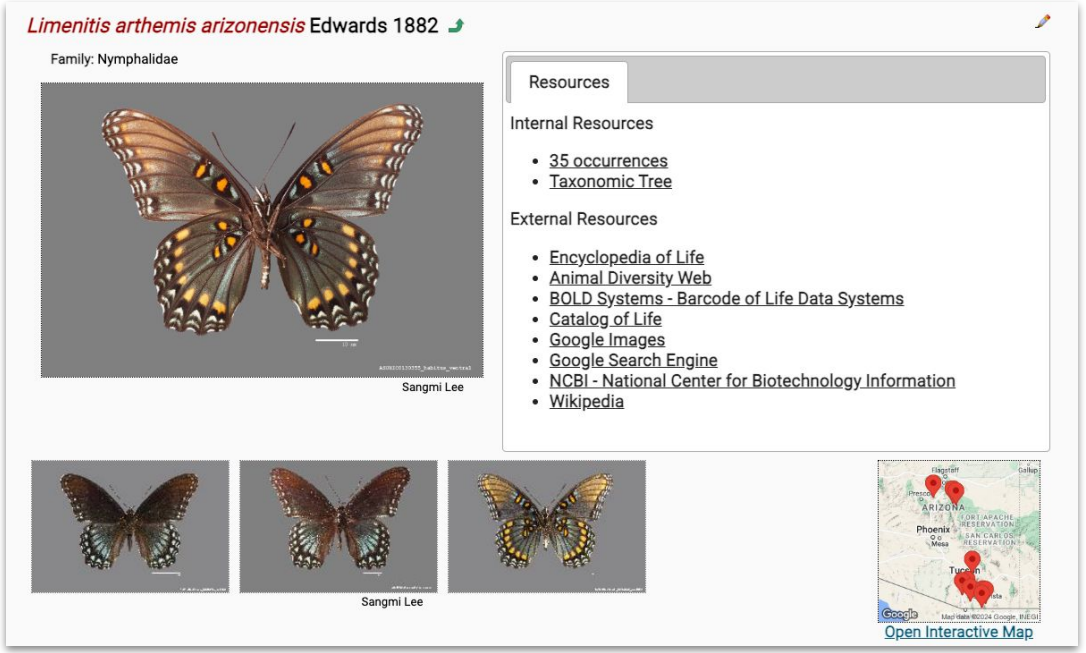
https://ecdysis.org/taxa/taxonomy/taxonomydisplay.php

Agenda

- Introduction to the Taxonomic Thesaurus
- Taxonomic thesaurus editing
- **Taxon profiles**

Taxon Profiles

- Provide additional information about taxa in the thesaurus
- Each profile displays **links** to **internal** and **external resources** related to taxa in the thesaurus



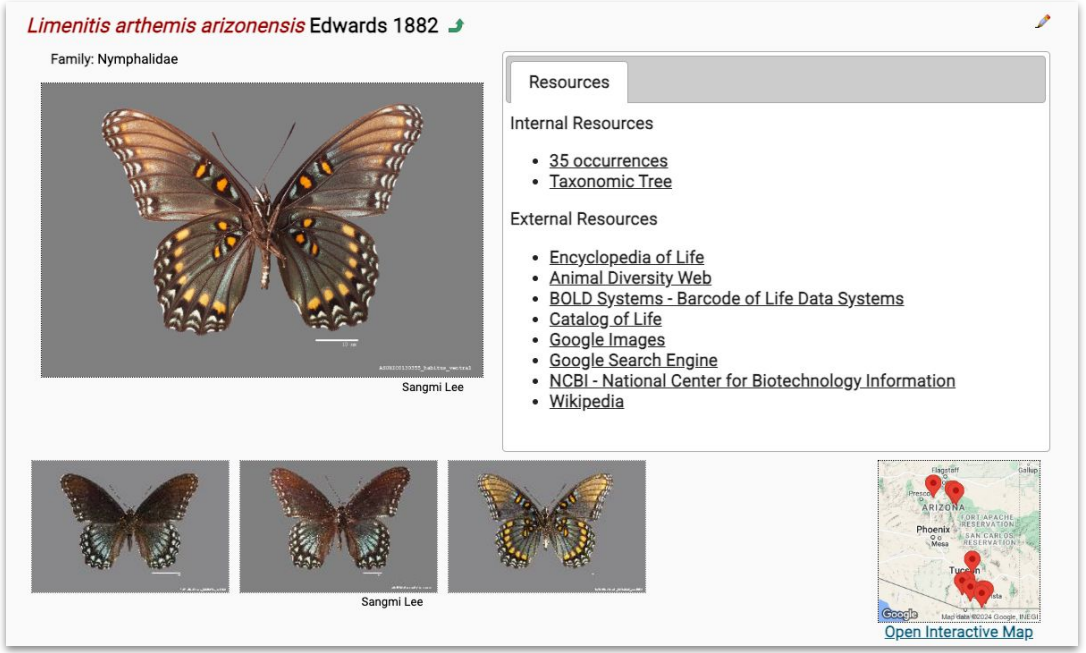
https://ecdysis.org/taxa/index.php?taxon=Limenitis+arthemis+arizonensis

Taxon Profiles

- Provide additional information about taxa in the thesaurus
- Each profile displays links to internal and external resources related to taxa in the thesaurus

To find taxon profiles:

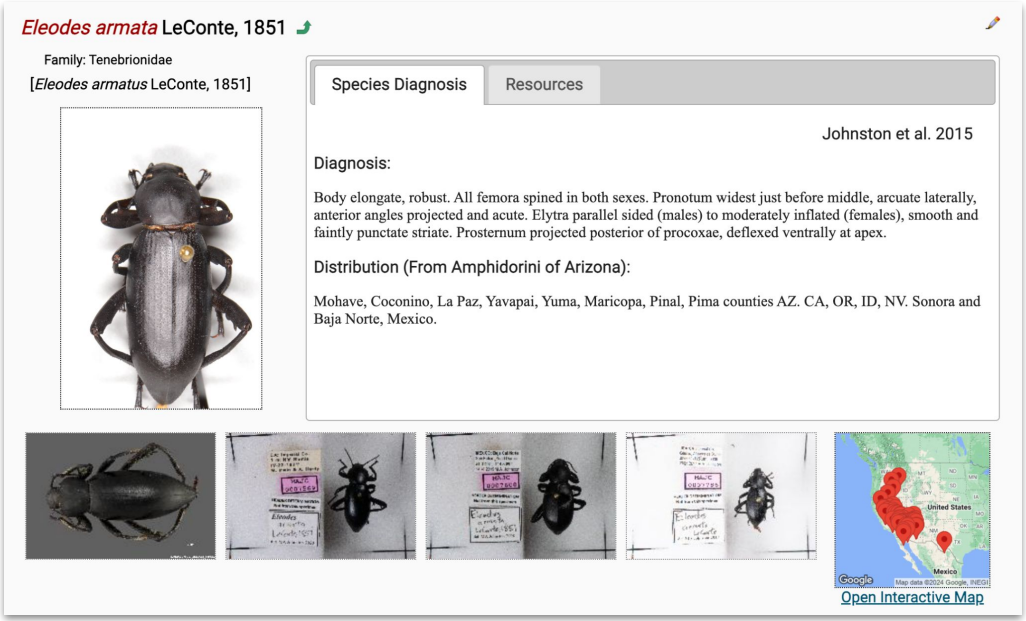
- Search on home page
- Select taxa in search results (list view)



https://ecdysis.org/taxa/index.php?taxon=Limenitis+arthemis+arizonensis

Taxon Profiles

- Any portal user can **view** taxon profiles
- Editing taxon profiles requires **different user permissions** than editing taxonomy in the thesaurus



https://ecdysis.org/taxa/index.php?taxon=Eleodes+armata

Questions?

Next week

- Campaign wrap up 🎉
- Publishing data to GBIF: why and how?
- Questions & Discussion

Ecdysis Portal Campaign

Final Office Hours - February 27, 2024

iDigBio
Integrated Digitized Biocollections

Symbiota

Agenda

- Portal campaign accomplishments: a recap
- Publishing to GBIF & iDigBio
- Further opportunities
- Discussion time

Agenda

- **Portal campaign accomplishments: a recap**
- Publishing to GBIF & iDigBio
- Further opportunities
- Discussion time

153,712

specimen records added over the course of the campaign

22,090

specimen images added over the course of the campaign


85k+
records with georeferences added

Other Success Stories

- Collections records updated in GRSciColl
  - registry.gbif.org

- New GBIF publishers
  - *Coming in 3.. 2.. 1..*

Sphaerocoris annulus by hubertus via iNaturalist. CC BY-NC 4.0.

Agenda

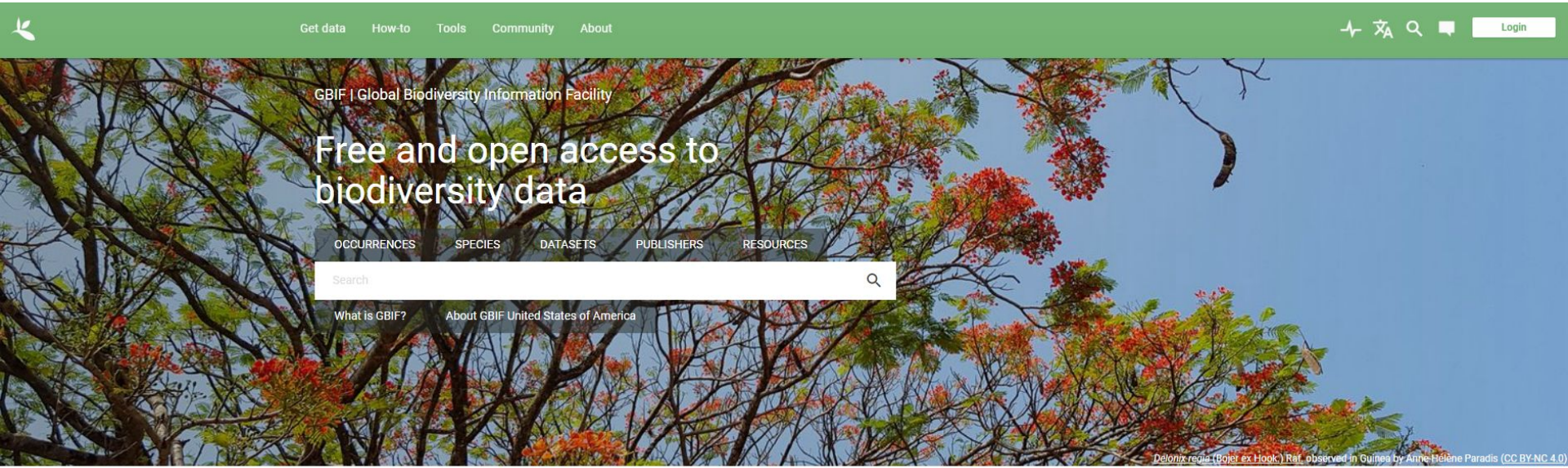
- Portal campaign accomplishments: a recap
- **Publishing to GBIF & iDigBio**
  - What is GBIF?
  - Why publish to GBIF?
  - How to publish to GBIF?
  - What about iDigBio?
- Further opportunities
- Discussion time

What is GBIF?

“an **international network** of country and organizational Participants that exists to enable **free and open access to biodiversity data** from all sources and to support biodiversity science, environmental research, and evidence based decision-making.”

GBIF Global Biodiversity Information Facility

GBIF data portal: gbif.org



2,640,176,605
Occurrence records

92,874
Datasets

2,189
Publishing institutions

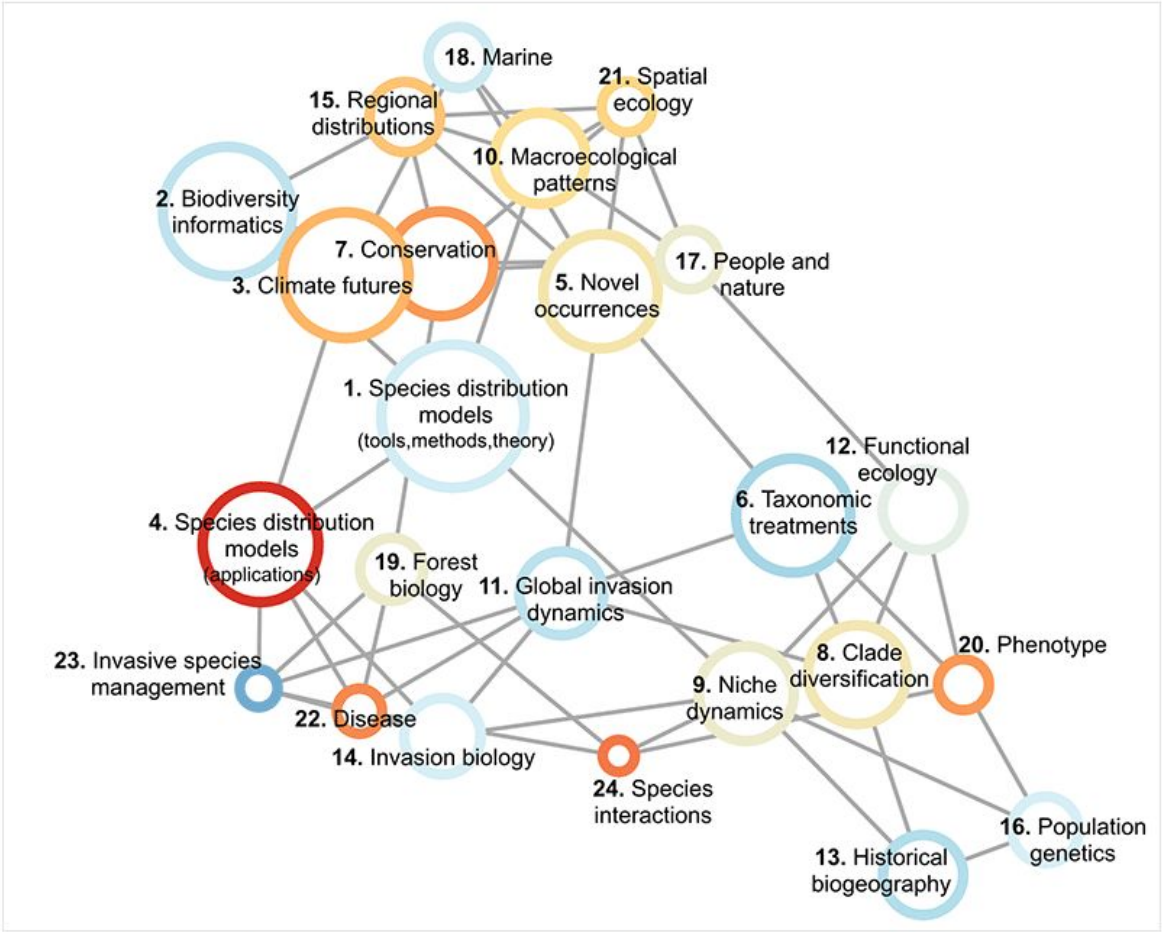
10,152
Peer-reviewed papers using data

Why Publish to GBIF?

- **Greater access** to your data → **greater visibility** for your collection

Why Publish to GBIF?

- Greater access to your data → greater visibility for your collection
- Allows **researchers** from a broader **range of disciplines** to compile **more comprehensive datasets**



Structural topic model results from 4,035 studies that used GBIF-mediated data published between 2003 and 2019.

https://docs.gbif.org/course-introduction-to-gbif/en/how-is-gbif-mediated-data-used.html

Why Publish to GBIF?

- Greater access to your data → greater visibility for your collection
- Allows researchers from a broader range of disciplines to compile more comprehensive datasets
- **Citation tracking**

PUBLISHER | SINCE APRIL 4, 2017

Arizona State University Biocollections

ABOUT METRICS HOME PAGE

673,214 OCCURRENCES 18 DATASETS 691 CITATIONS

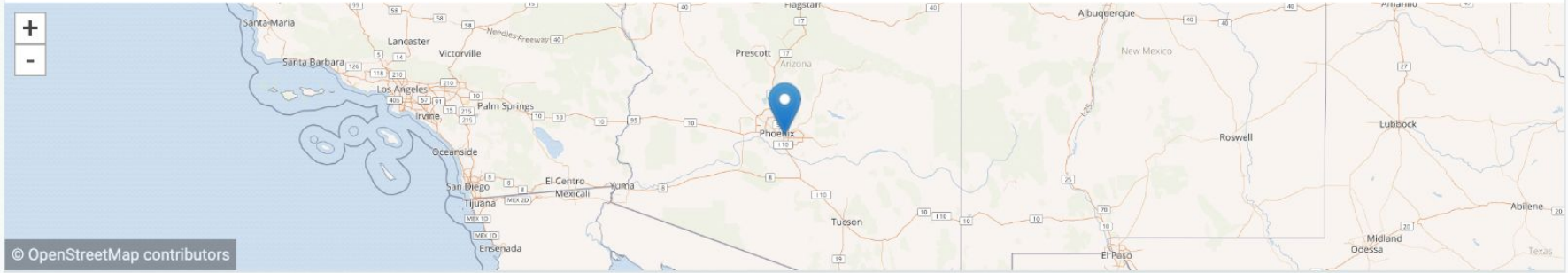
Description: The Arizona State University Biocollections comprise two sets of distinct collections: (1) the Arizona State University Natural History Collections - currently with nine collections focused on documenting Greater Sonoran and New World biodiversity; and (2) the NEON Biorepository at Arizona State University, with a unique constellation of organismal and environmental samples generated in the context of monitoring and forecasting long-term ecological change in the North American subcontinent, including Alaska, Hawaii, and Puerto Rico.

Endorsed by: Symbiota Support Hub

Administrative contact: Nico Franz

Technical contact: Laura Rocha Prado

Country or area: United States of America



CONTACTS

https://www.gbif.org/publisher/814cdfb5-d4f8-4453-815f-ea5df98e76bf

Why Publish to GBIF?

- Greater access to your data → greater visibility for your collection
- Allows researchers from a broader range of disciplines to compile more comprehensive datasets
- Citation tracking
- **Data quality flags**

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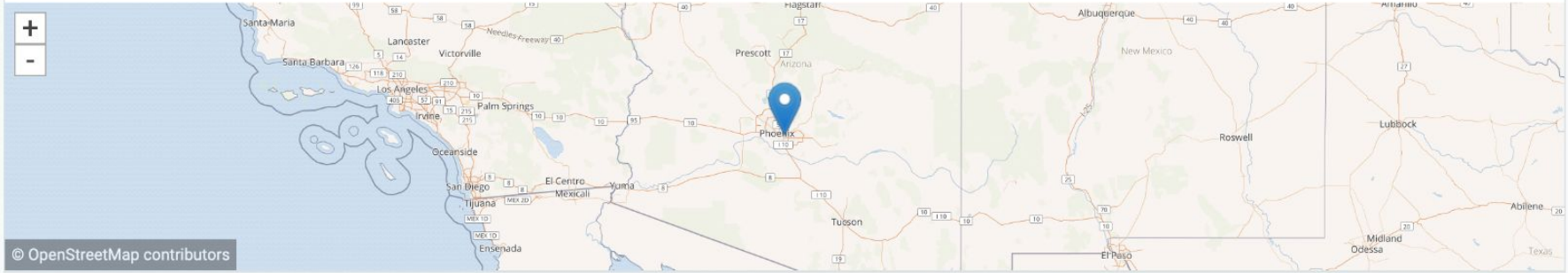

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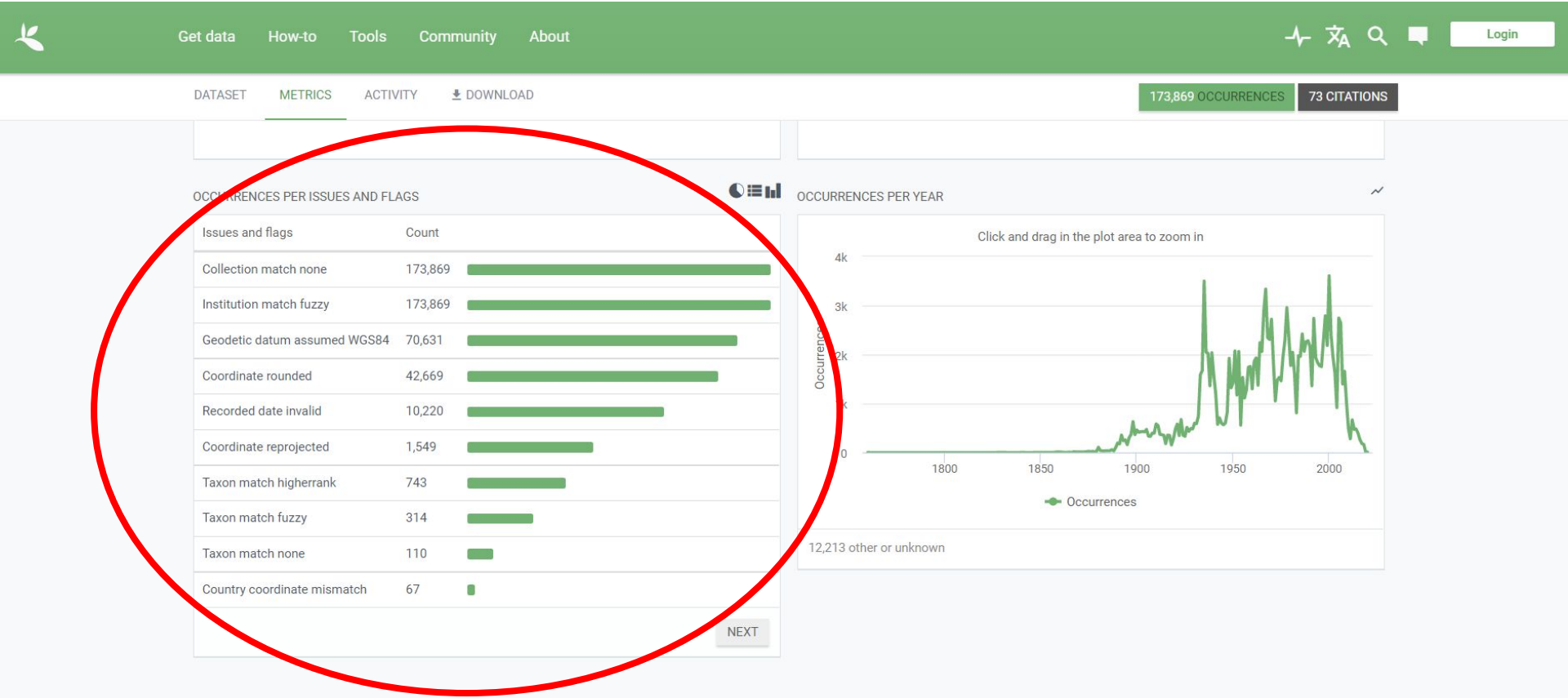
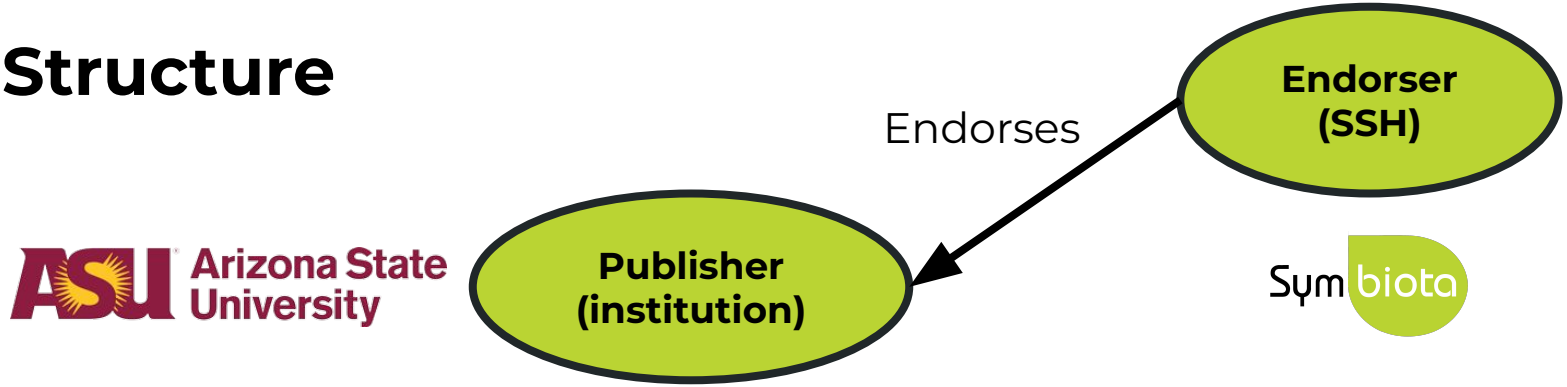

Get data
How-to
Tools
Community
About
Login
DATASET
METRICS
ACTIVITY
DOWNLOAD
173,869 OCCURRENCES
73 CITATIONS
OCCURRENCES PER ISSUES AND FLAGS
Issues and flags
Count
Collection match none 173,869
Institution match fuzzy 173,869
Geodetic datum assumed WGS84 70,631
Coordinate rounded 42,669
Recorded date invalid 10,220
Coordinate reprojected 1,549
Taxon match higherrank 743
Taxon match fuzzy 314
Taxon match none 110
Country coordinate mismatch 67
NEXT
OCCURRENCES PER YEAR
Click and drag in the plot area to zoom in
4k
3k
2k
0
1800
1850
1900
1950
2000
Occurrences
12,213 other or unknown

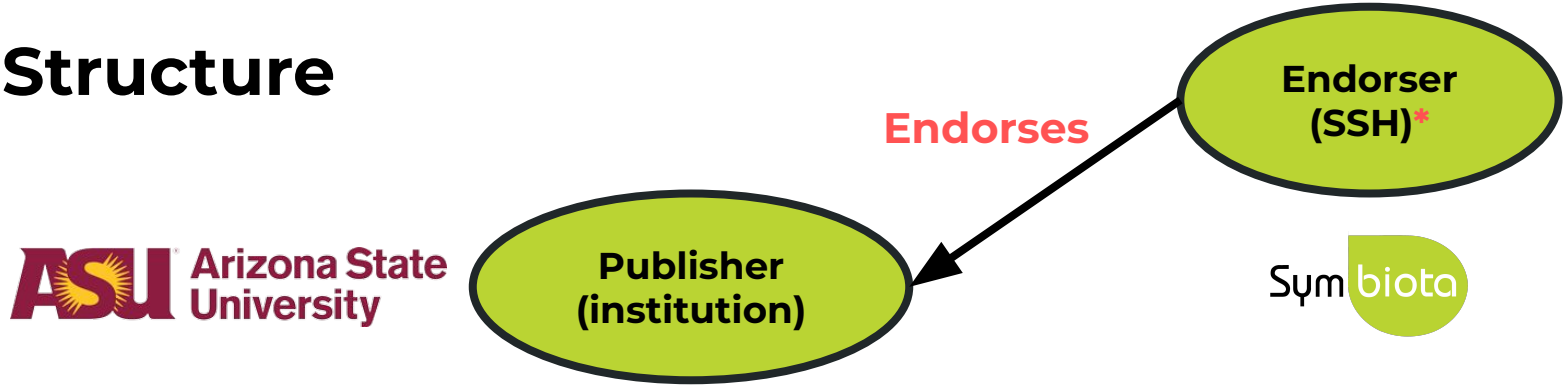
How do I publish to GBIF?

GBIF Structure

GBIF Structure



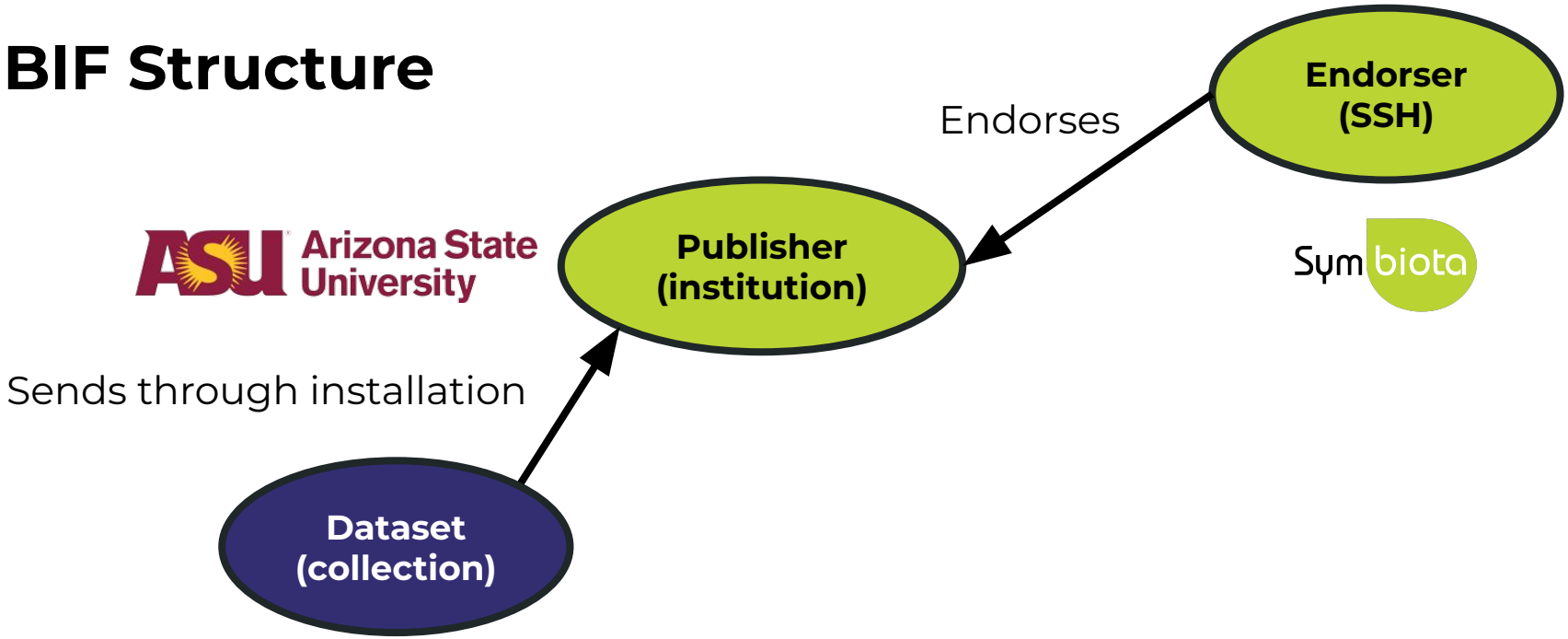
GBIF Structure



*Or your country's node, if not US-based

*Or (possibly) SSH if your country does not have a node

GBIF Structure



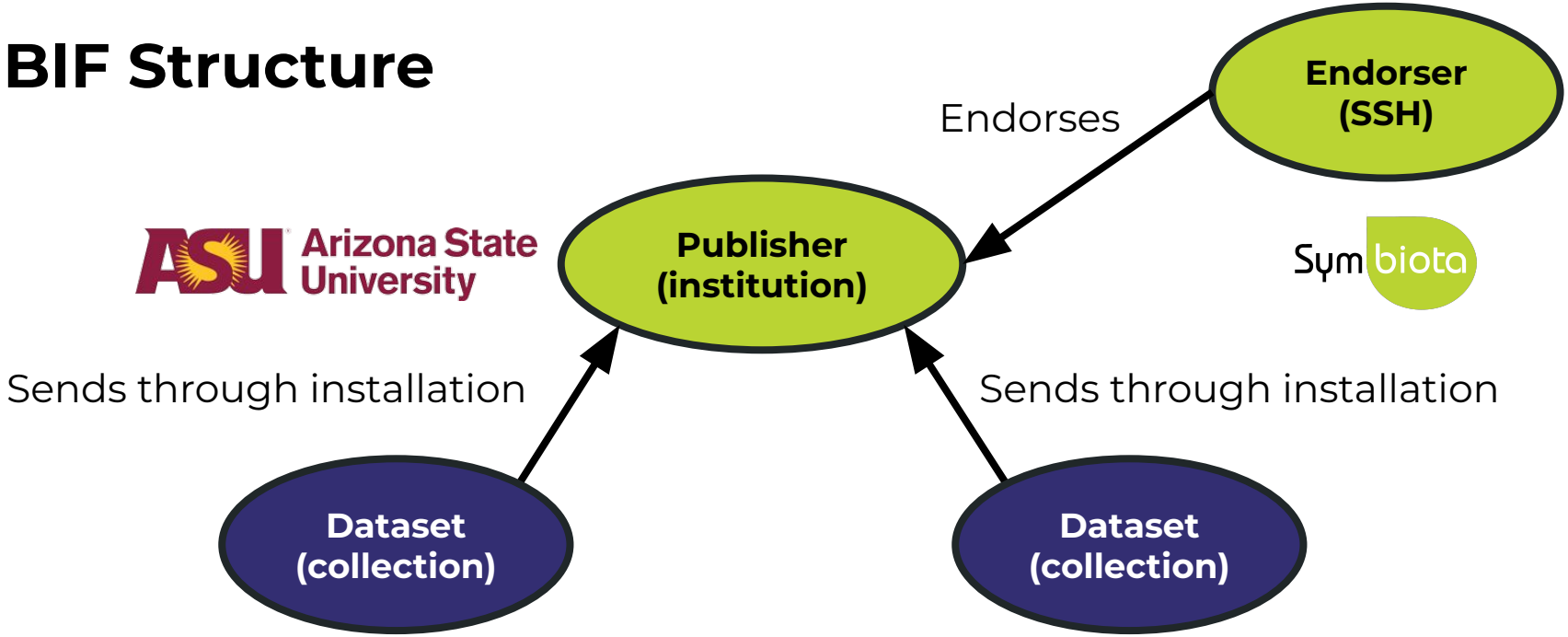
Arizona State University

Symbiota

Arizona State University Mammalogy Collection

Consortium of Small Vertebrate Collections

GBIF Structure



Arizona State University

Symbiota

Arizona State University Mammalogy Collection

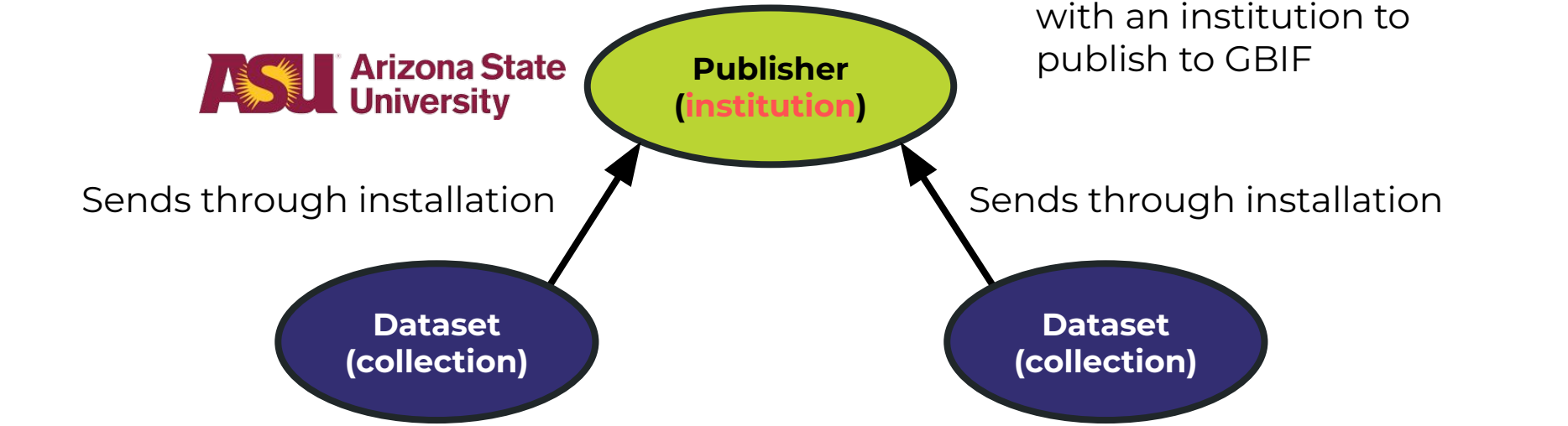
Arizona State University Vascular Plant Herbarium

Consortium of Small Vertebrate Collections

SEINet Arizona - New Mexico Chapter

GBIF Structure

*If your collection is **project-based/personal**, you must coordinate with an institution to publish to GBIF



Consortium of
Small
Vertebrate
Collections

PUBLISHER | SINCE APRIL 4, 2017

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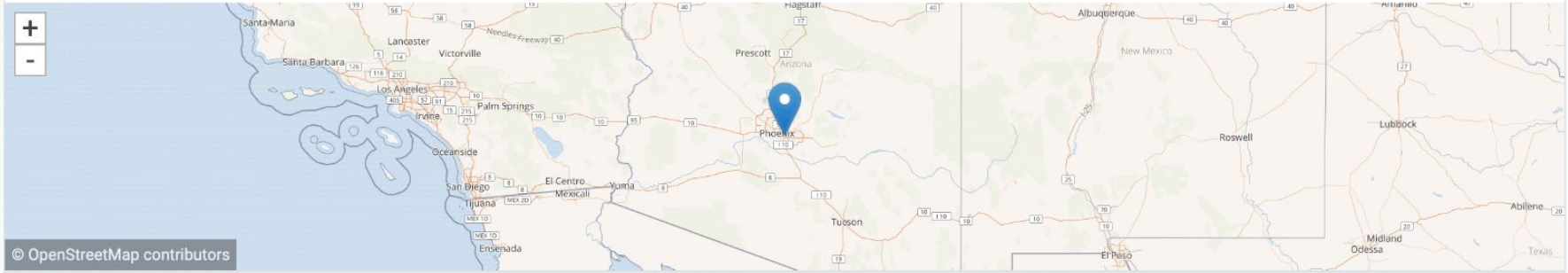


CONTACTS

https://www.gbif.org/publisher/814cdfb5-d4f8-4453-815f-ea5df98e76bf

SEARCH DATASETS | 18 RESULTS

ALL | OCCURRENCE | CHECKLIST | SAMPLING EVENT | METADATA

DOWNLOAD AS TSV

Arizona State University Vascular Plant Herbarium

Occurrence dataset

The Arizona State University Vascular Plant Herbarium (ASU) is among the most important in the greater Sonoran Desert region with over 315,000 specimens. We are particularly proud of our holdings of C...

Published by Arizona State University Biocollections

283,279 occurrences | 407 citations

Arizona State University Hasbrouck Insect Collection

Occurrence dataset

The ASU Frank F. Hasbrouck Insect Collection contains approximately 1,000,000 insect specimens, representing at least 25 orders, 390 families, 4,000 genera, 12,000 species and 1,240 subspecies. Most s...

Published by Arizona State University Biocollections

167,107 occurrences | 155 citations

Arizona State University Lichen Herbarium

Occurrence dataset

No description available

Published by Arizona State University Biocollections

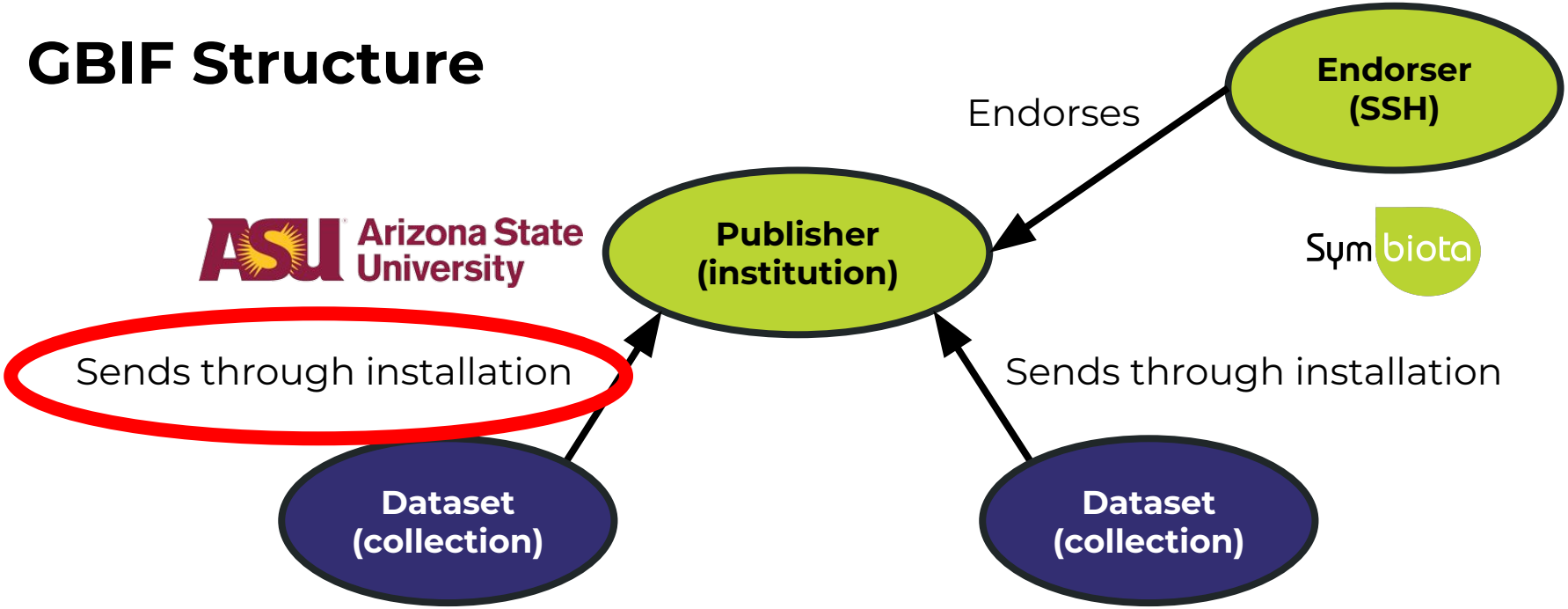
123,620 occurrences | 105 citations

Arizona State University Herpetology Collection

Occurrence dataset

The Herpetology Collection at the ASU Natural History Collections contains approximately 38,000 specimens representing more than 900 species, with a geographic concentration in the western United Stat...

GBIF Structure



Consortium of
Small
Vertebrate
Collections

How to publish to GBIF

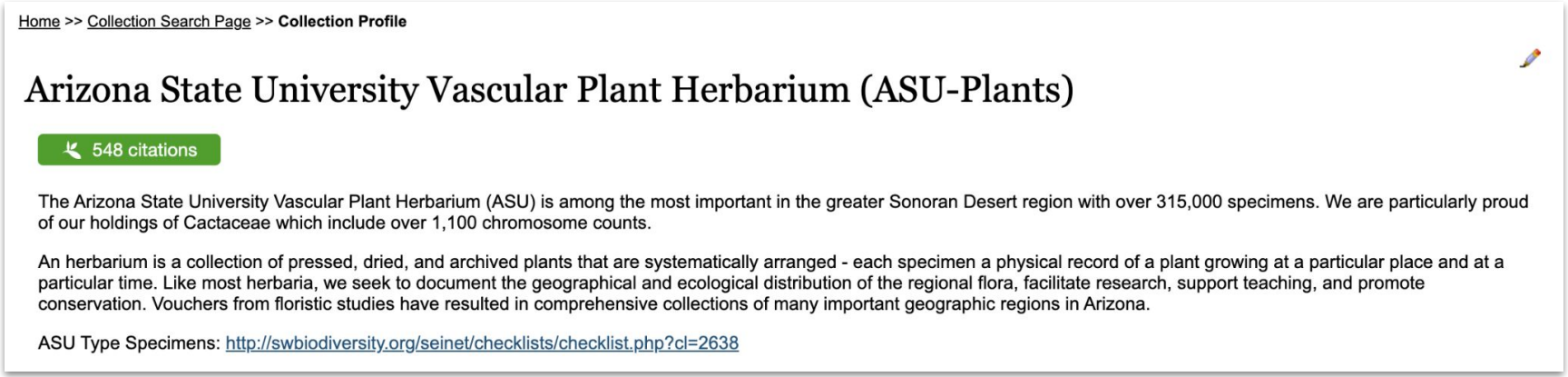
- You can send your data to GBIF using a Symbiota portal **OR** an Integrated Publishing Toolkit (IPT)
- You can use someone else's IPT (e.g., VertNet, iDigBio), or install and manage your own IPT

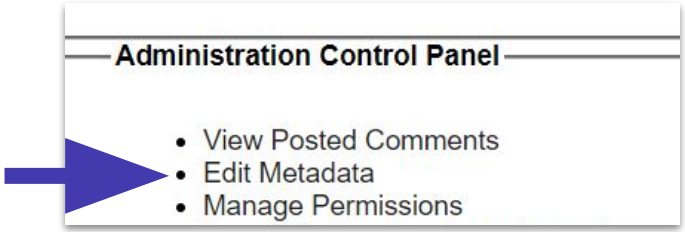
How to publish to GBIF

- Fortunately, **if your data are in a Symbiota portal, you don’t need an IPT.**
- Once your institution is registered with GBIF, publishing is as easy as clicking a button!

Publishing to GBIF from a Symbiota portal

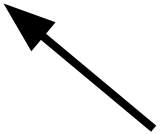
1. Make sure your **metadata are accurate**





Publishing to GBIF from a Symbiota portal

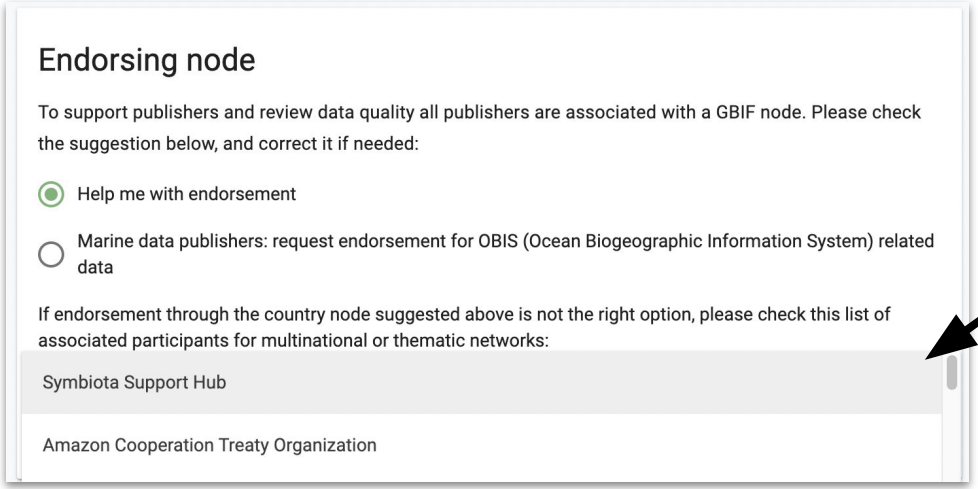
1. Make sure your metadata are accurate
2. *(If not already done)* **Request to become a publisher** in GBIF: https://www.gbif.org/become-a-publisher



This page allows you to search for your institution to see if it's already registered.

Publishing to GBIF from a Symbiota portal

1. Make sure your metadata are accurate
2. *(If not already done)* **Request to become a publisher** in GBIF: https://www.gbif.org/become-a-publisher



SSH can (and wants to) endorse you if your institution is US-based

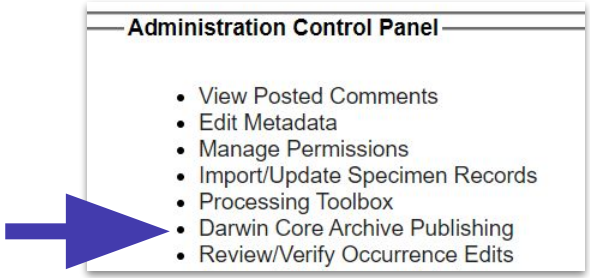
Publishing to GBIF from a Symbiota portal

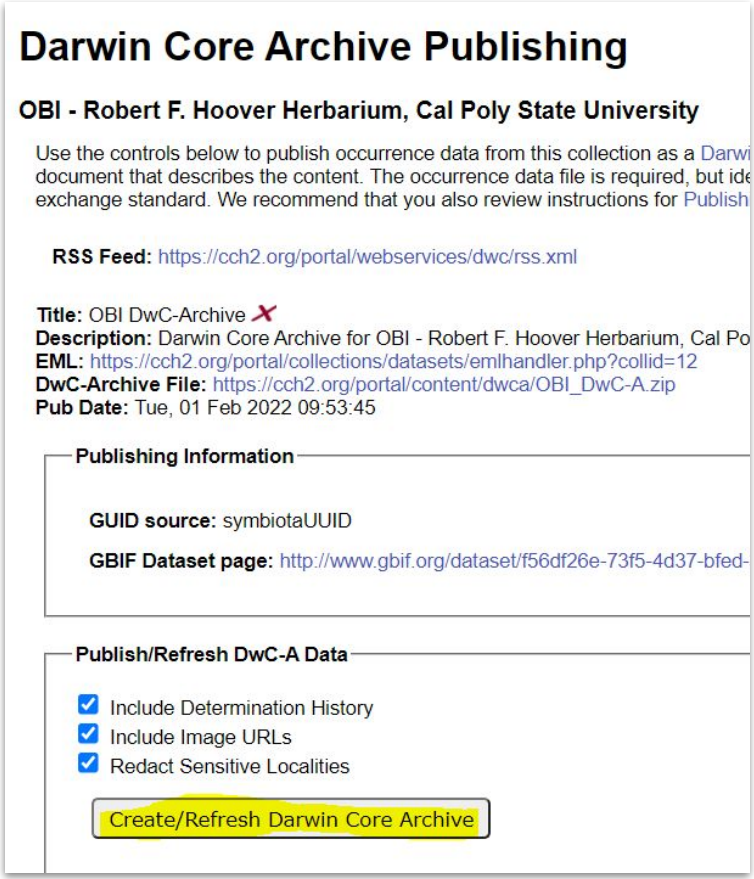
1. Make sure your metadata are accurate
2. *(If not already done)* Request to become a publisher in GBIF: https://www.gbif.org/become-a-publisher
3. Once approved, enter your **dataset key** in “Darwin Core Archive Publishing” in your portal
4. **Email GBIF** (helpdesk@gbif.org) to notify them that the portal has your permission to push your dataset to GBIF (an example email is provided!)
5. Once approved, **publish** the data!

We can help with Steps 3-5 (Email us after Step 2)

Important notes

- **GBIF doesn't automatically harvest your data**
- Push the button to refresh: "**Create/Refresh Darwin Core Archive**"
  - Data that are redacted in your Symbiota portal will also be redacted in GBIF





OBI - Robert F. Hoover Herbarium, Cal Poly State University (OBI)

393 citations

The Hoover Herbarium houses 85,000+ specimens of vascular plants, algae, lichens, and bryophytes. The geographic focus is San Luis Obispo areas of California, other states of the US, particularly Arizona, and some from other regions of the world, especially Mexico. Emphasis areas in collections include Robert F. Hoover (1946–1969), David J. Keil (1966–present), Rhonda Riggins (1970s–2000), Tracy Call (mostly Apiaceae—I extensively in undergraduate teaching and training.

Important Collections: Robert F. Hoover (1946–1969), David J. Keil (1966–present), Rhonda Riggins (1970s–2000), Tracy Call (mostly Apiaceae

Director and Associate Professor: Jenn Yost, jyost@calpoly.edu

Curator: Katie Pearson, kdpearso@calpoly.edu

Homepage: http://bio.calpoly.edu

Collection Type: Preserved Specimens

Management: Live Data managed directly within data portal

Global Unique Identifier: 3818d95b-b6a4-11e8-b408-001a64db2964

DwC-Archive Access Point: https://cch2.org/portal/content/dwca/OBI_DwC-A.zip

Live Data Download: DwC-Archive File

Digital Metadata: EML File

Usage Rights: CC BY-NC (Attribution-Non-Commercial)

GBIF Dataset page: http://www.gbif.org/dataset/f56df26e-73f5-4d37-bfed-3d46c0834e82

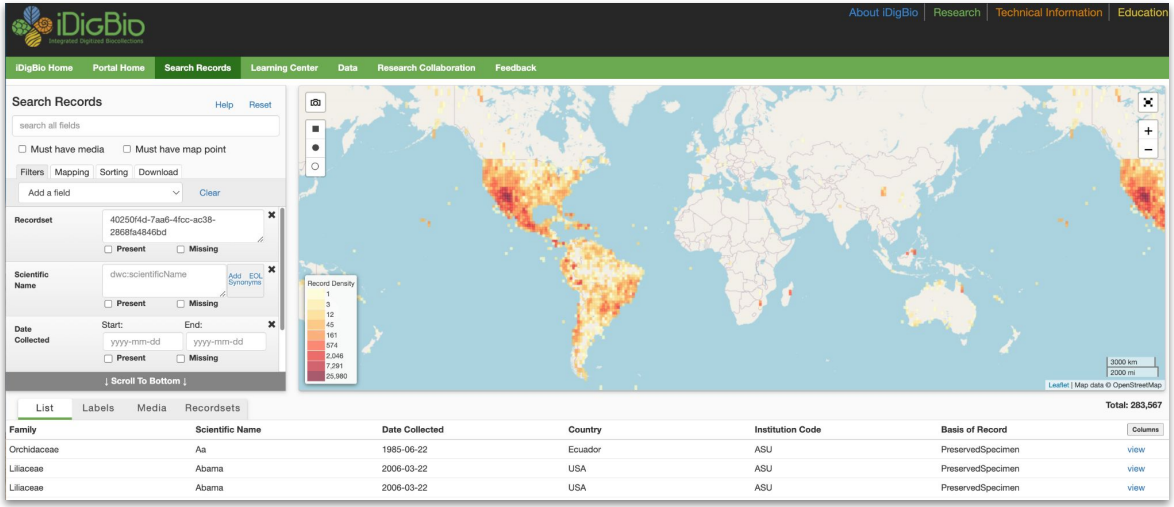
Address: Robert F. Hoover Herbarium
Biological Sciences Department, California Polytechnic State University
San Luis Obispo, CA 93407-0401
USA
(805) 756-5869

Collection Statistics

- 93,149 specimen records
- 64,830 (70%) georeferenced
- 81,168 (87%) with images (81,417 total images)
- 89,512 (96%) identified to species
- 400 families
- 2,673 genera
- 11,464 species
- 14,186 total taxa (including subsp. and var.)

What about iDigBio?

- Once you've published to GBIF, publishing to iDigBio is **very easy**
- The SSH can facilitate publishing to iDigBio for everyone who publishes to GBIF.



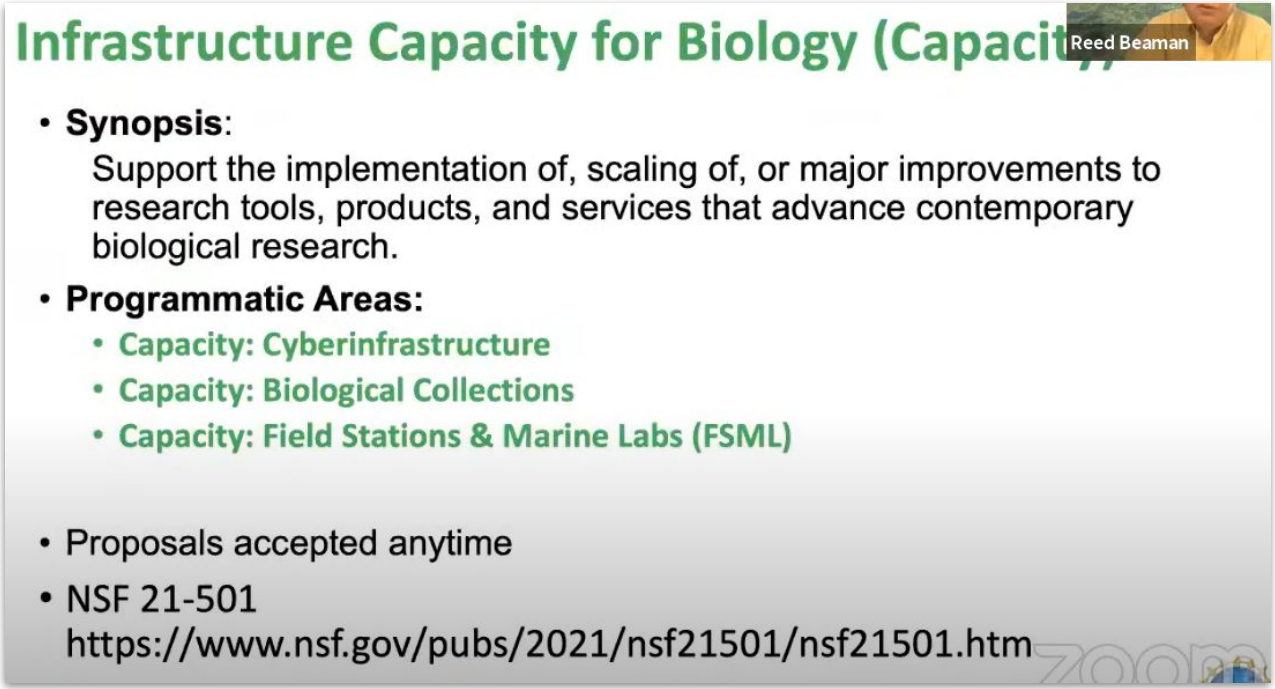
Questions?

Agenda

- Portal campaign accomplishments: a recap
- Publishing to GBIF & iDigBio
- **Further opportunities**
- Discussion time

Maintaining Momentum: Digitization Funding

- See: symbiota.org/funding-ideas
  - NSF grants
  - IMLS grants
- Institutional grants



Portal Enhancements

The Symbiota Support Hub was funded to support existing digitization and mobilization activities, not to develop new tools...

Portal Enhancements → Funding Needed

The Symbiota Support Hub was funded to support existing digitization and mobilization activities, not to develop new tools...

...however, new tool development can be initiated with outside support.

Portal Enhancements → Funding Needed

The Symbiota Support Hub was funded to support existing digitization and mobilization activities, not to develop new tools…

…however, new tool development can be initiated with outside support.

So, **if you want a specific tool, include funds for its development in your next digitization grant!**

Including Symbiota development into your grant

1. Determine **need(s)/want(s)** for your portal
   a. And appropriate funding sources: symbiota.org/funding-ideas
2. **Meet with Symbiota Support Hub** team to discuss possibilities and necessary funding.
3. With SSH help, **include portal development in budget**

Including Symbiota development into your grant

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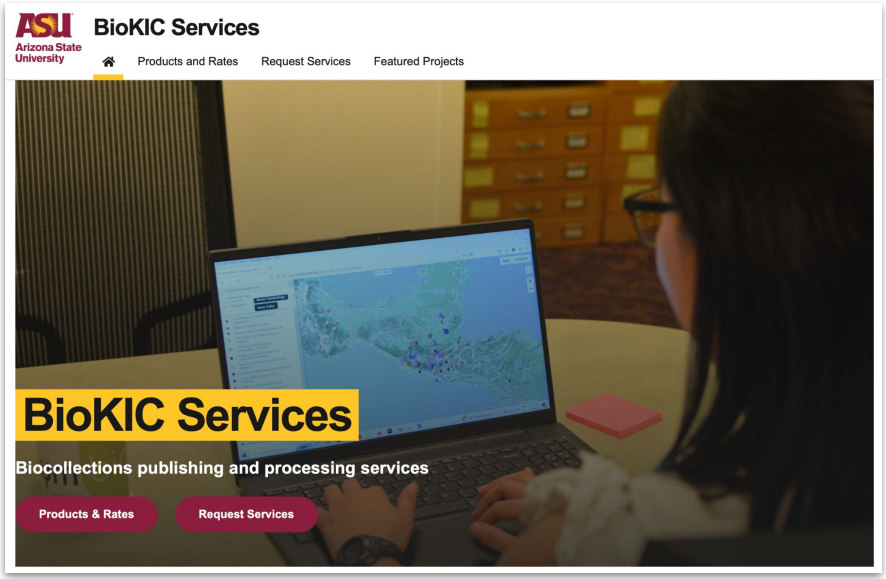
2. Meet with Symbiota Support Hub team to discuss possibilities and necessary funding.
3. **With SSH help, include portal development in budget**
    a. **Three options:**
        - Collaborating institution
        - Subaward
        - Contract with BioKIC Services

No grant?

- Contract with BioKIC Services: services.biokic.asu.edu



More about Symbiota sustainability planning: symbiota.org/sustaining-symbiota-services

Next Steps: Working Groups?

The Steering Committee is interested in forming **Working Groups** to tackle issues relevant to our community

- **Best practices**: defining them, documenting them
  - Controlled vocabularies
  - Label transcription methods
  - Workflow documentation
  - Taxonomy maintenance
    - Taxonomy lead contact is Jennifer Girón: Jennifer.Giron@TTU.edu
  - ... and more

Promotional Poster

MyCoPortal poster at the Mycological Society of America meeting, July 2023

Staying Connected

- **New Google Group** address: **ecdysis@googlegroups.com**
- If you did not receive an invitation and want to join, go to:
  - **groups.google.com/g/ecdysis**
  - Click the “Ask to join group” button at the top, or you email the Hub to be added
  - Use to **communicate as a community**, as well as for technical updates

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  - Use to **communicate as a community**, as well as for technical updates

Standing Opportunities

To summarize:

- Contact the Hub if you need help **publishing** your data to **GBIF**
- Admins can request **Taxonomy Editor permissions**: help@symbiota.org
- **Enhance your portal** (and the Symbiota code!) by including the Symbiota Support Hub in a **grant** or contracting through **BioKIC Services**
- Start or join a **working group** in collaboration with the Steering Committee
- Join the **Ecdysis Google Group**: groups.google.com/g/ecdysis
- Take a **promotional poster** to a conference
- Participate in the monthly **Symbiota Support Group**

What about the Symbiota Support Hub?

We’re still here to help!

help@symbiota.org

Feedback survey

Please complete our brief post-campaign survey

- **bit.ly/post-campaign-survey**