



VIRTUAL ADBC SUMMIT 2020



Day 1

iDigBio Orientation

Break-out Session

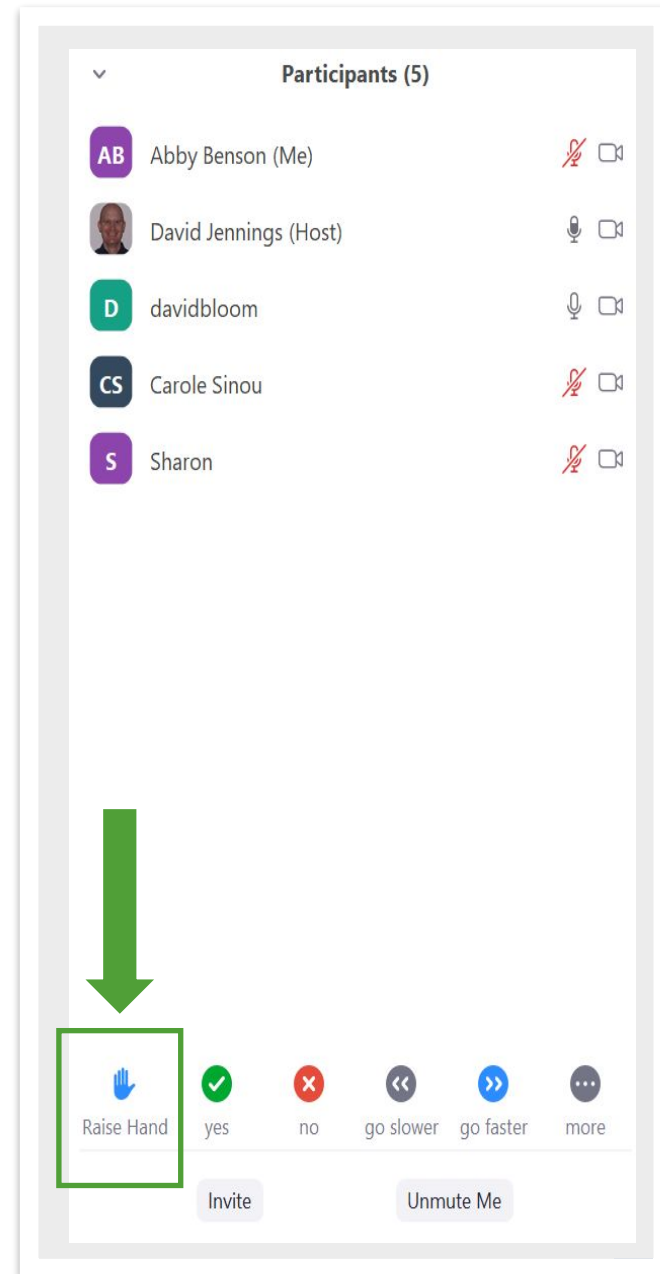
Break-out Follow-up Discussion

Meet and Greet for New TCNs and PENs



Protocols and Norms

- Session is being recorded
- Please keep yourself muted when not speaking
- Use Chat for questions
 - or raise your hand via the Participants tab





Welcome to ADBC!

The iDigBio Team
ADBC Summit 2020





Agenda

- **Introduction – Gil**
- **Acronyms – Erica**
- **Resources – Jill/Molly**
- **Get Involved – Alnycea**
- **TCN Responsibilities – David**
- **Getting Data to iDigBio – Cat**



iDigBio, Coordinating Center for NSF's Program to Improve Accessibility to Specimen-based Data in U.S. Biodiversity Collections

22 September 2020

Gil Nelson, Director of iDigBio
Florida Museum of Natural History
University of Florida, Gainesville
gnelson@floridamuseum.ufl.edu



iDigBio is funded by grants from the National Science Foundation's Advancing Digitization of Biodiversity Collections Program [DBI-1115210 (2011-2018) and DBI-1547229 (2016-2021)]. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation. © 2011-2020 iDigBio



iDigBio: 10th Year

Began summer 2011

Renewal fall 2016



Principal Investigators:

Gil Nelson, Director (FLMNH)

David Blackburn, EODI Collaborations (FLMNH)

José Fortes, Cyberinfrastructure (UF/ACIS)

**Austin Mast, Digitization, Training, & Citizen
Science (FSU)**

Pam Soltis, Research Collaborations (FLMNH)





Context: Biodiversity Collections

**Institutional collections in U.S. date back to 1812,
with some specimens collected 250 years ago**



~1,591 collections in USA

**~1 billion specimens
in USA**

**~3 billion specimens
globally**





Context: *Biodiversity Collections*

Until now: Data in collections have been
inaccessible to most potential users



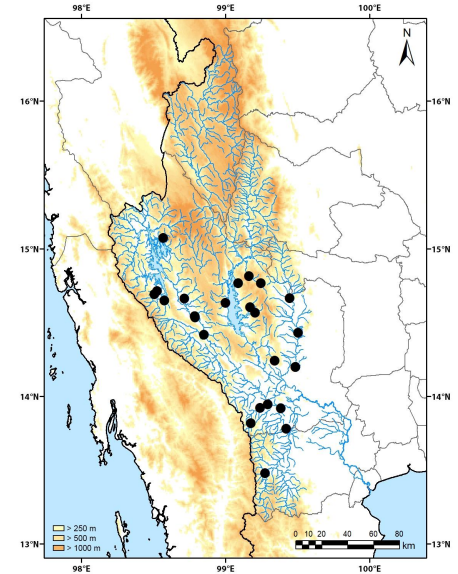
Cerceris compacta





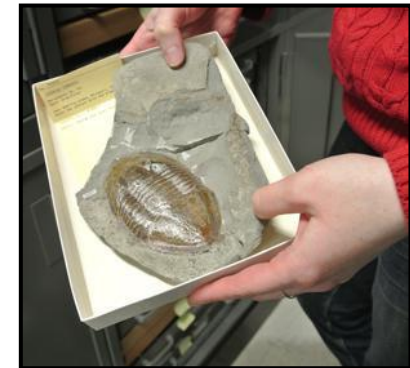
Natural History Collections are fundamental to understanding biodiversity and to address “Big Science” questions:

- **How many species are there?**
- **How are species distributed on the planet, and why?**
- **How do species vary, and what factors are responsible?**
- **Etc.**



Specimens of extinct species

- **only source of information on those species**
- **paleoenvironments**





NSF’s Advancing Digitization of Biodiversity Collections Program, based on the national digitization effort as outlined in NIBA Strategic Plan, was launched in 2010 with the goal:

To digitize and make available online data associated with all specimens in all non-federal natural history collections in the U.S.



Funding:

- 1. Thematic Collections Networks (TCNs)**
- 2. Partners to Existing Networks (PENs)**
- 3. Central coordinating unit (iDigBio)**



1. Thematic Collections Networks

- **Two-to-four year awards to collaborating institutions to digitize existing specimens based on a research theme**
- **Institutions digitize and mobilize the specimen-based data (but not necessarily pursue the research)**
- **Major emphasis has been on databasing, georeferencing, and imaging**



2. Partners to Existing Networks

- **Awards that fund additional collections critical to answering TCN questions.**





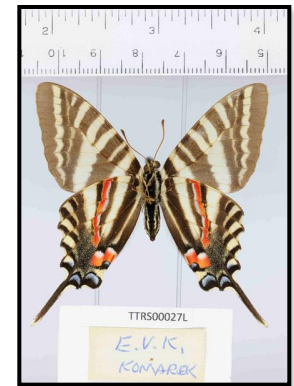
29 Thematic Collections Networks (TCNs) 48 Partners to Existing Networks (PENs)

- **InvertNet**: An Integrative Platform for Research on Environmental Change, Species Discovery and Identification (*Illinois Natural History Survey, University of Illinois*)
- **Plants, Herbivores, and Parasitoids**: A Model System for the Study of Tri-Trophic Associations (*American Museum of Natural History*)
- **North American Lichens and Bryophytes**: Sensitive Indicators of Environmental Quality and Change (*University of Wisconsin Madison*)
- **Digitizing Fossils** to Enable New Syntheses in Biogeography-Creating a PALEONICHES-TCN (*University of Kansas*)
- **The Macrofungi Collection Consortium**: Unlocking a Biodiversity Resource for Understanding Biotic Interactions, Nutrient Cycling and Human Affairs (*New York Botanical Garden*)
- **Mobilizing New England Vascular Plant Specimen Data** to Track Environmental Change (*Yale University*)
- **Southwest Collections of Arthropods Network (SCAN)**: A Model for Collections Digitization to Promote Taxonomic and Ecological Research (*Northern Arizona University*)
- **The Macroalgal Herbarium Consortium**: Accessing 150 Years of Specimen Data to Understand Changes in the Marine/Aquatic Environment (*University of New Hampshire*)
- Developing a Centralized Digital Archive of **Vouchered Animal Communication Signals** (*Cornell University*)
- **Fossil Insect Collaborative**: A Deep-Time Approach to Studying Diversification and Response to Environmental Change (*University of Colorado at Boulder*)
- **Great Lakes Invasives**: Documenting the Occurrence through Space and Time of Aquatic Non-indigenous Fish, Mollusks, Algae, and Plants Threatening North America's Great Lakes (*University of Wisconsin Madison*)
- **InvertEBase**: Reaching Back to See the Future: Species-rich Invertebrate Faunas Document Causes and Consequences of Biodiversity Shifts (*Field Museum of Natural History*)
- **The Key to the Cabinets**: Building and Sustaining a Research Database for a Global Biodiversity Hotspot (*Appalachian State University*)
- **The Microfungi Collections Consortium**: A Networked Approach to Digitizing Small Fungi with Large Impacts on the Function and Health of Ecosystems (*INHS, University of Illinois*)
- **Documenting Fossil Marine Invertebrate Communities of the Eastern Pacific**: Faunal Responses to Environmental Change over the last 66 million years (*University of California-Berkeley*)
- **Cretaceous World**: The Cretaceous World: Digitizing Fossils to Reconstruct Evolving Ecosystems in the Western Interior Seaway (*University of Kansas*)
- **LepNet**: Lepidoptera of North America Network: Documenting Diversity in the Largest Clade of Herbivores (*Northern Arizona University*)
- **MAM**: The Mid-Atlantic Megalopolis: Achieving a greater scientific understanding of our urban world (*University of Pennsylvania*)
- **SoRo**: Using Herbarium Data to Document Plant Niches in the High Peaks and High Plains of the Southern Rockies (*University of Colorado*)
- **oVert**: Open Exploration of Vertebrate Diversity in 3D (*University of Florida*)
- **Capturing California's Flowers**: Using Digital Images to Investigate Phenological Change in a Biodiversity Hotspot (*California Polytechnic State University San Luis Obispo*)
- **The Pteridological Collections Consortium**: An Integrative Approach to Pteridophyte Diversity Over the Last 420 Million Years (*University of California – Berkeley*)
- **Digitizing "Endless Forms"**: Facilitating Research on Imperiled Plants with Extreme Morphologies (*New York Botanical Garden*)
- Digitizing Collections to **Trace Parasite-Host Associations** and Predict the Spread of Vector-Borne Disease (*Purdue University*)
- American Crossroads: **Digitizing the Vascular Flora of the South-Central United States** (*Botanical Research Institute of Texas*)
- **Enhancing Access to Taxonomic and Biogeographical Data** to Stem the Tide of Extinction of the Highly Imperiled Pacific Island Land Snails (*Bernice P. Bishop Museum*)
- Building a **global consortium of bryophytes and lichens**: keystones of cryptobiotic communities (*University of Tennessee Knoxville*)
- Mobilizing Millions of **Marine Mollusks of the Eastern Seaboard** (*Field Museum of Natural History*)
- Documenting Marine Biodiversity through **Digitization of Invertebrate Collections**: DigIn (*Los Angeles County Museum of Natural History Foundation*)



3. National Coordinating Center (DigBio)

- **Engage the collections community** – find the specimens
- **Enable digitization of biodiversity collections data**
 - Develop efficient & effective standards & workflows
 - Workforce education & training via workshops/webinars
- **Provide portal access to biodiversity data**
 - Enable data access & discoverability
 - Respond to cyberinfrastructure needs
- **Promote use of data to address environmental and economic challenges**
 - Researchers, educators, general public, policy-makers, etc.
- **Assist in planning long-term sustainability of national digitization effort**



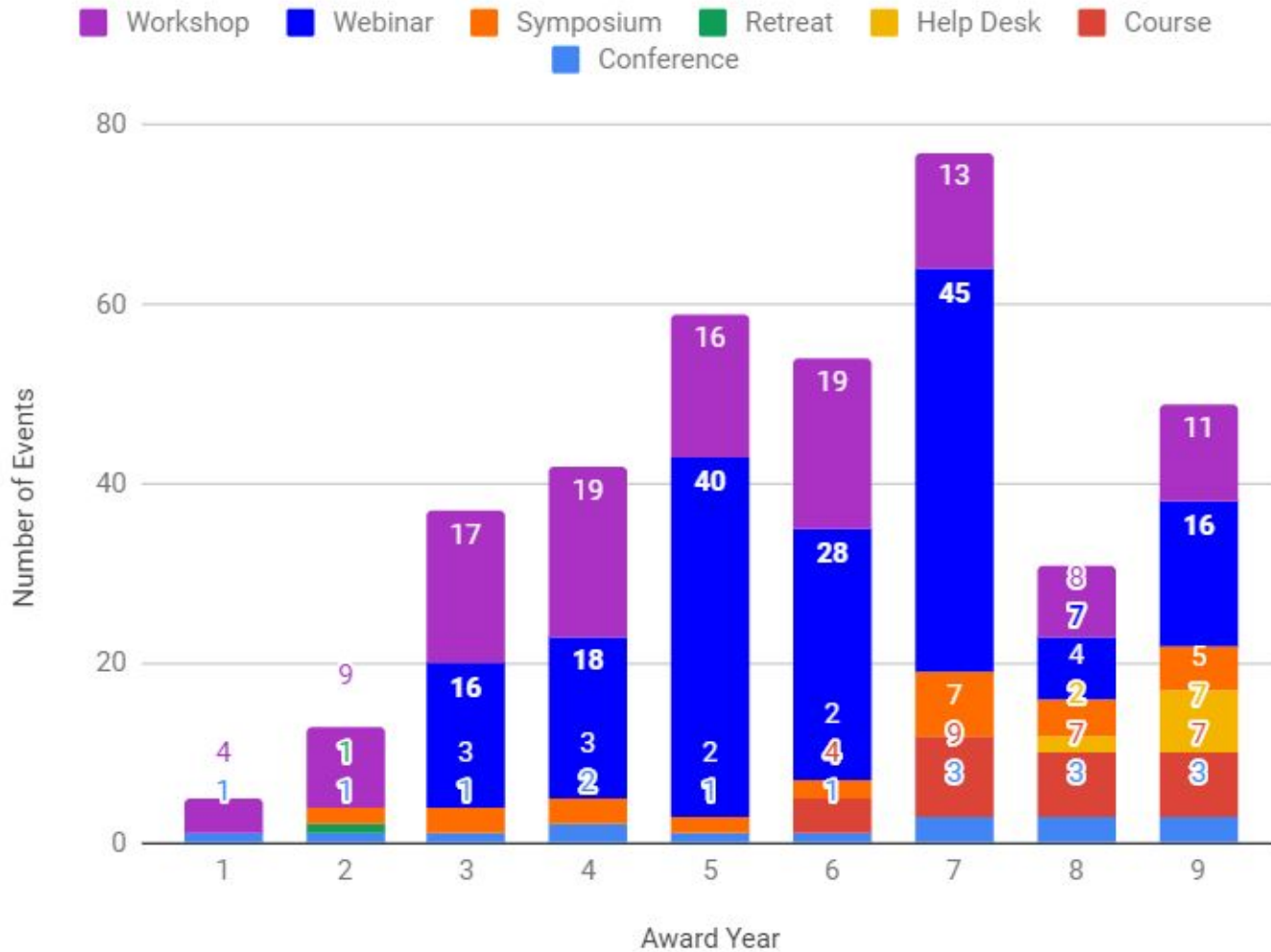


All of this has required iDigBio to engage the collections community through workshops, webinars, and other events to develop workflows, train IT and collections staff, mobilize data, etc.





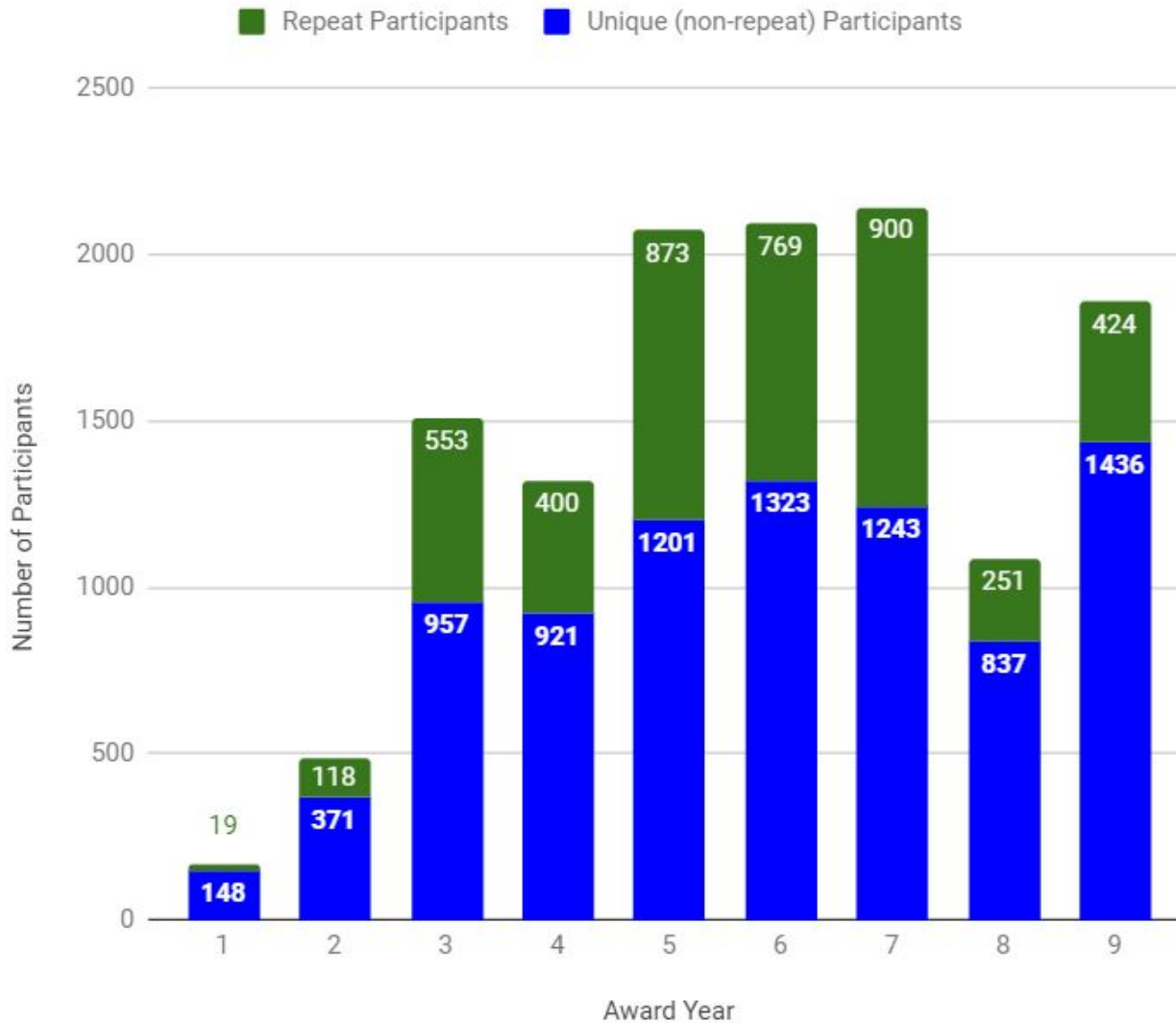
iDigBio Events by Type



367 Total Events



Participants in iDigBio Events



12,744 Total Participants



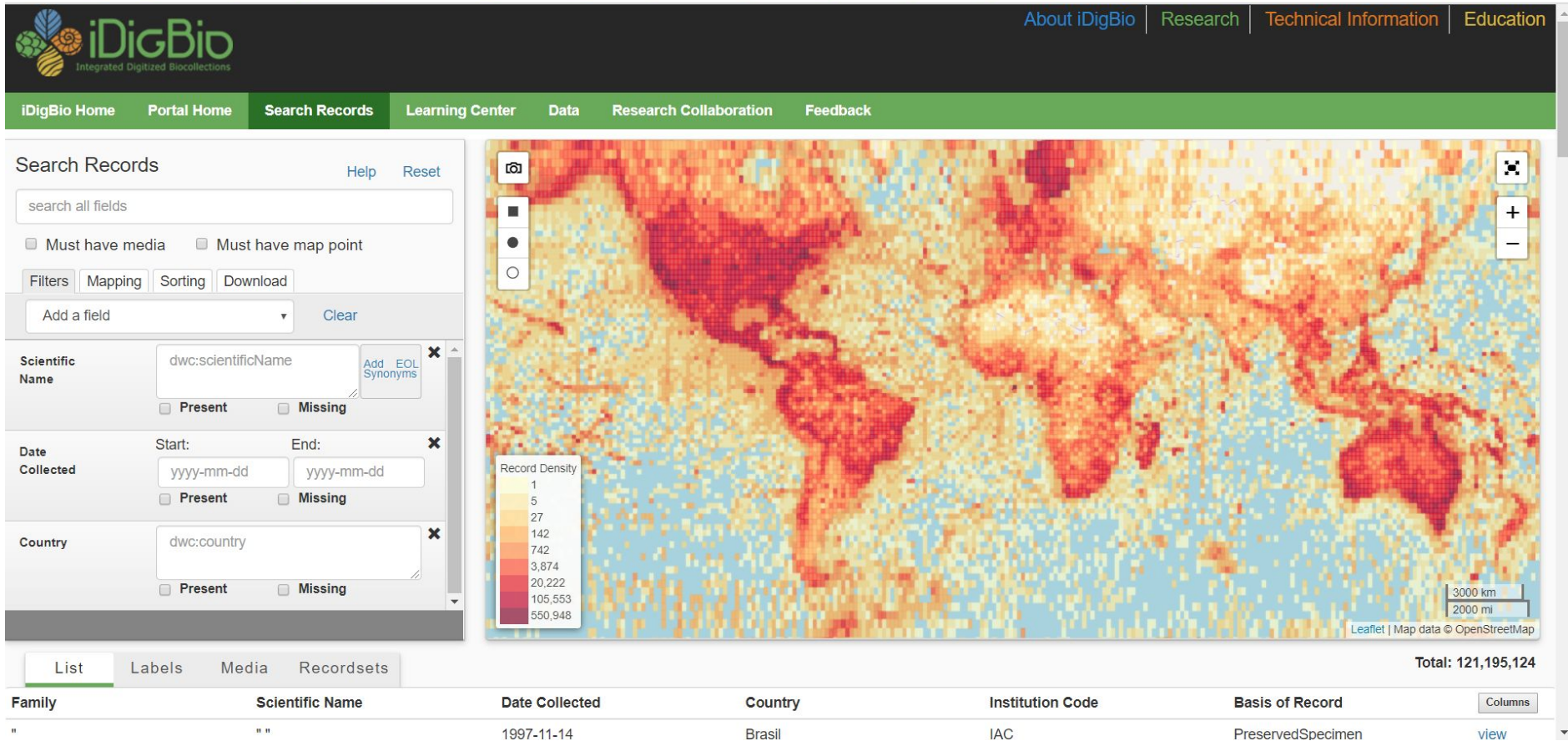
**iDigBio is working
with 926 collections
in 317 institutions
funded by the
ADBC program**



**The iDigBio Portal
has 127M records for
~381M specimens
with 40M associated
media records**



Flexible search across all data, indexed fields, media, geolocation, map boundary, auto-completion, synonyms, and a robust API



Search Records [Help](#) [Reset](#)

search all fields

Must have media Must have map point

Filters Mapping Sorting Download

Add a field [Clear](#)

Scientific Name [Add EOL Synonyms](#)

Present Missing

Date Collected Start: End:

Present Missing

Country

Present Missing

Record Density Legend:

- 1
- 5
- 27
- 142
- 742
- 3,874
- 20,222
- 105,553
- 550,948

Total: 121,195,124

Family	Scientific Name	Date Collected	Country	Institution Code	Basis of Record	Columns
"	"	1997-11-14	Brasil	IAC	PreservedSpecimen	view



View search results as list, labels, or media

List	Labels	Media	Recordsets								Total: 188,896
Family	Scientific Name	Date Collected	Country	Institution Code	Collected By	Locality	Occurrence ID	Catalog Number	Columns		
Suberitidae	Tuberella aaptos	1899-10-19	Puerto Rico	USNM	United States Fish Commis...	Mayaguez Harbor	http://n2t.net/ark:/65665/33f...	7662	view		
Pteridae	Abaeis nicippe	1981-10	Puerto Rico	UPRM	Emmer, J. C.	Guayanilla	23df77d9-ccb0-11e4-8f8b-0...	4626	view		
Pteridae	Abaeis nicippe	11/15/81	Puerto Rico	UPRM	De Jesé*, L.	Ponce	23df7219-ccb0-11e4-8f8b-0...	4624	view		
Pteridae	Abaeis nicippe	11/15/87	Puerto Rico	UPRM	De Jesé*, L.	Ponce	23df79b7-ccb0-11e4-8f8b-0...	4627	view		
Pteridae	Abaeis nicippe	9/4/89	Puerto Rico	UPRM	Blanco, J.	Aguadilla	23aa6184-ccb0-11e4-8f8b-0...	820	view		
Pteridae	Abaeis nicippe	11/14/48	Puerto Rico	UPRM	Torres, C.	Mayaguez	23df75f4-ccb0-11e4-8f8b-0...	4625	view		
Calligidae	Abasia sp.	1977-10-07	Puerto Rico	USNM	S. Alchuler	La Parguera	http://n2t.net/ark:/65665/3e...	266843	view		
Delphacidae	Abbosoga errata	1914-07-27	PUERTO RICO	AMNH	Unknown	Maricao	urn:uuid:886a07f8-d8e1-11...	UDCC_TCN 00016869	view		
Delphacidae	Abbosoga errata	1947-11-14	Puerto Rico	USNM	no data	Toro Negro Mt., P.R.	http://n2t.net/ark:/65665/3e...	no data	view		
Delphacidae	Abbosoga errata	1962-07-01	PUERTO RICO	USNM	J. Maldonado Capriles	Puntita	urn:uuid:28ab0c86-ca62-11...	UDCC_TCN 00042679	view		
Delphacidae	Abbosoga errata	1999-08-08	PUERTO RICO	IBOR	C. W. O'Brien & P. Kovarik	Hwy 120 km 14 Maricao St	urn:uuid:93af671e-ca62-11...	UDCC_TCN 00042678	view		

List **Labels** Media Recordsets

[Abbosoga errata Caldwell & Martorell, 1951](#)

PUERTO RICO, Maricao, none, Maricao
 Lat: 18°10' 58" Lon: -66°58' 49"
 AMNH, UDCC_TCN 00016869, Unknown

Animalia, Arthropoda, Insecta, Hemiptera

1914-07-27



Delphacidae

[Abelmoschus moschatus medik. Medik.](#)

Puerto Rico, Mayagüez (MITA).
 Lat: 18°12' 15" Lon: -67°6' 1"
 NY, 01007392, A. H. Liogier

Plantae, Tracheophyta, Magnoliopsida, Malvales

1981-03-



Malvaceae

[Pecten mayaguezensis Dall & Simpson](#)

Puerto Rico, Mayaguez Harbor
 Lat: 18°25' 30" Lon: -67°9' 11"
 USNM, Invertebrate Zoology, 160062, United States Fish Commission

Animalia, Cnidaria, Anthozoa, Scleractinia




Pectiniidae

List Labels **Media** Recordsets

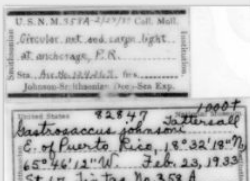
[Anolis cristatellus wileyae MCZ, Herp](#)

3 of 5




[Coifmanniella johnsoni USNM, Invertebrate Zoology](#)

1 of 1




[Adiantum obliquum US, Botany](#)

1 of 1




[Platycrepidius UPRM, INVCOL](#)

3 of 3



[Coereba flaveola TTRS, Ornithology](#)

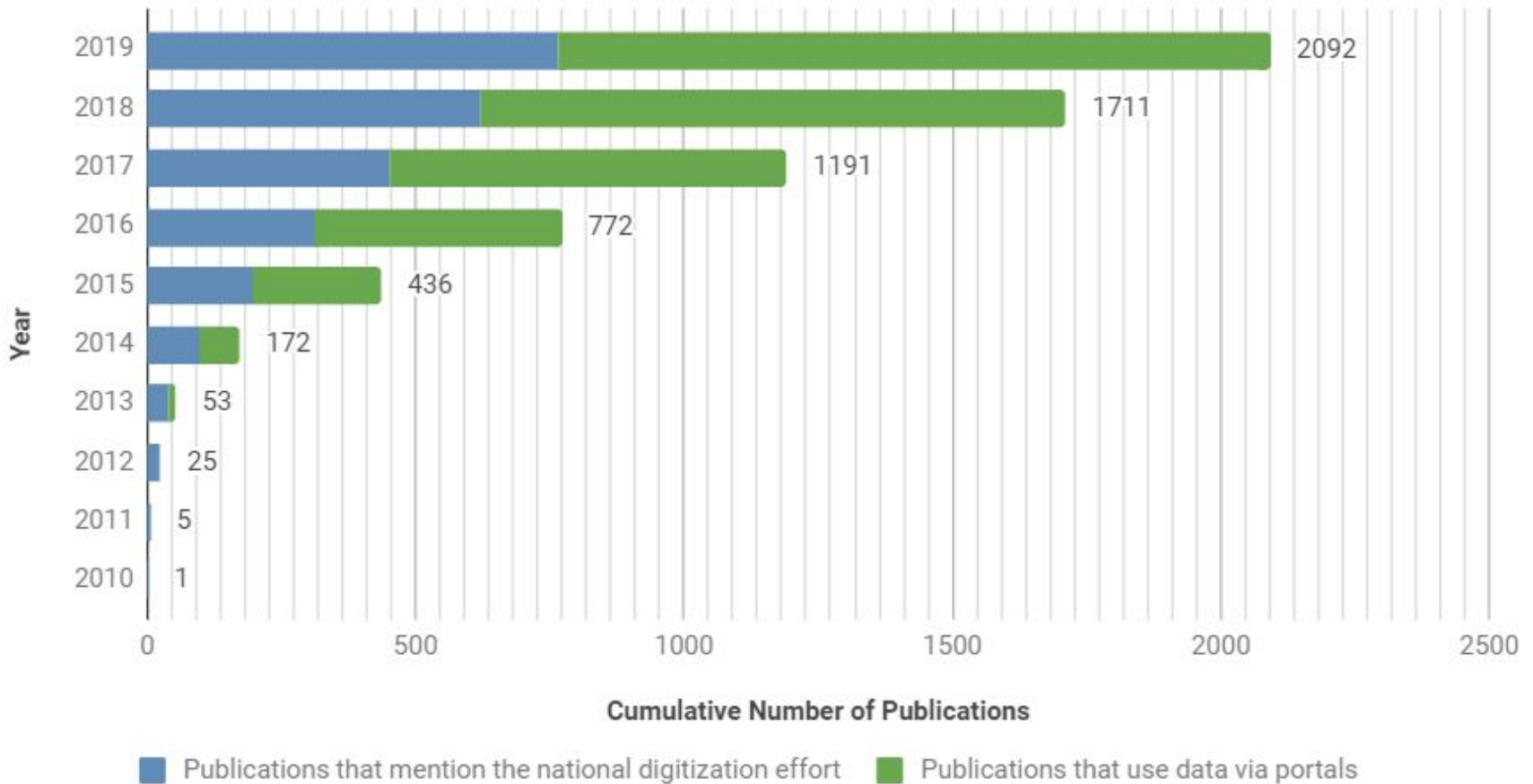
3 of 3





Publications Citing Portal Data Use

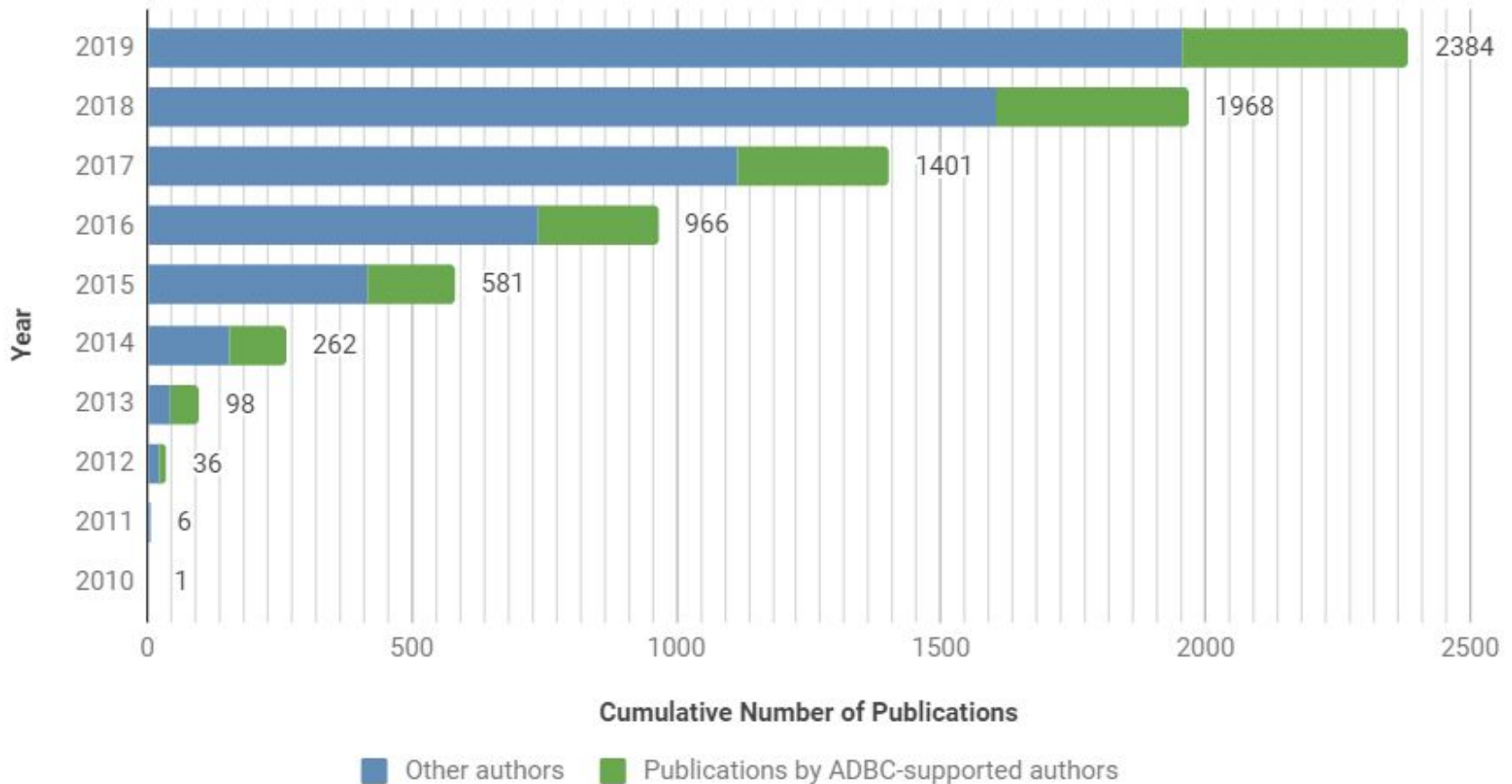
Status of the National Biodiversity Collections Digitization Effort

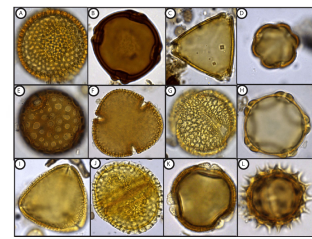
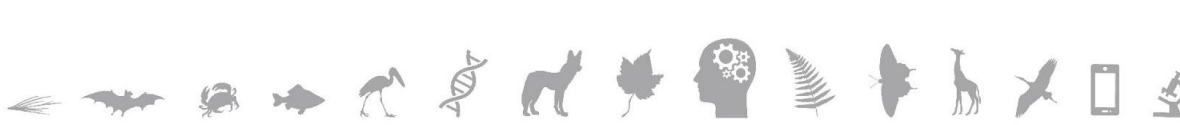




Publications by ADBC Authors

Publications Related to the National Digitization Effort by Source









Digitization

Collection Management Software

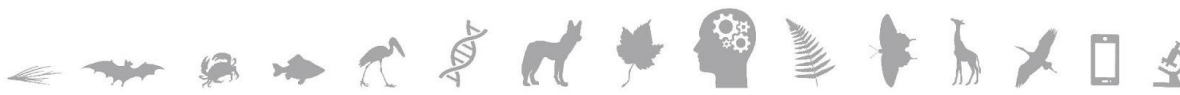
- Arctos 
- Symbiota 
- Specify 
- Axiell EMu 
- CollectionSpace 

Data Mobilization

-  Biodiversity Information Standards
- DwC - Darwin Core
-  **GBIF** INTEGRATED PUBLISHING TOOLKIT^(IPT)
free and open access to biodiversity data
- IPT - Integrated Publishing Toolkit
- OpenRefine 
-  **GEOLocate**
- DAMS – Digital Asset Management
- ABBYY, Tesseract
- *Global unique identifiers*
 - GUID, UUID, ARK, IGSN

Community Building

-  **SPNHC**
ADVANCING COLLECTIONS CARE
- GRBio to GBIF  **GRBio**
GLOBAL
REGISTRY OF
BIODIVERSITY
REPOSITORIES
- Darwin Core Hour 
- Small Collections Network 
- Entomological Collections Network 
- Working Groups:
 - DROID, GWG, SWG, PaleoDigi, EODI, ...



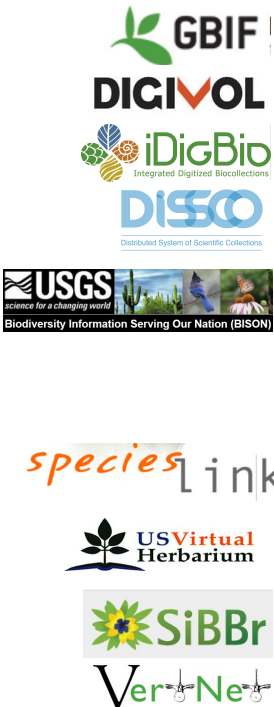
an alliance for biodiversity knowledge

Data Aggregation

Facilitating Research Access and Use

- - Encyclopedia of Life
- BHL – Biodiversity Heritage Library
- – National Ecological Observatory Network
- - facilitating scientific research in the cloud

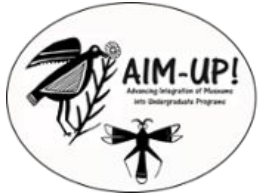
Aggregating Specimen Data



- GBIF – Global Biodiversity Information Facility
- ALA, DigiVol – Atlas of Living Australia
- iDigBio
- DiSSCo - Distributed System of Scientific Collections
- BISON – Biodiversity Serving our Nation – United States GBIF Node
- Canadensys
- CONABIO (Mexico)
- CRIA (Brazil) and SpeciesLink
- USVH – United States Virtual Herbarium
- SiBBR – Brazilian Biodiversity Information System
- VertNet



Education, Outreach, Inreach



- AIM-UP!
 - Advancing Integration of Museums into Undergraduate Programs; using collections data in undergraduate education



- BLUE
 - Biodiversity Literacy in Undergraduate Education



- Notes from Nature
 - Crowdsourcing collections transcription, creating communities



- iNaturalist
 - observation app, connecting scientists and the general public



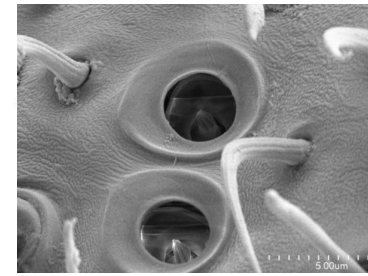
- ePANDDA
 - Enhancing Paleontological and Neontological Data Discovery API, connecting scientific literature with specimens



- The Carpentries - Data Carpentry & Software Carpentry, Reproducible Science Curriculum, ...
 - **Biodiversity informatics skills** for those in the biodiversity community. Focus on tidy data, fit for reproducible research.



- QUBES
 - Quantitative Undergraduate Biology Education & Synthesis. QUBESHub (website) hosts OERs (Open Educational Resources) from our community.



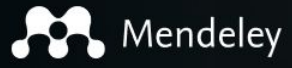
Publishing



- Pensoft
 - ARPHA Writing Tool (AWT), BISS



- DataCite, DOI (Digital Object Identifier)
 - Find, share and reuse, cite data, connect and get credit



- Mendeley
 - Free reference manager; organize papers, read & annotate your PDFs



- ORCID
 - Open Researcher and Contributor ID



- DataONE
 - Data Observation Network for Earth (DataONE) – data repository and data management best practices



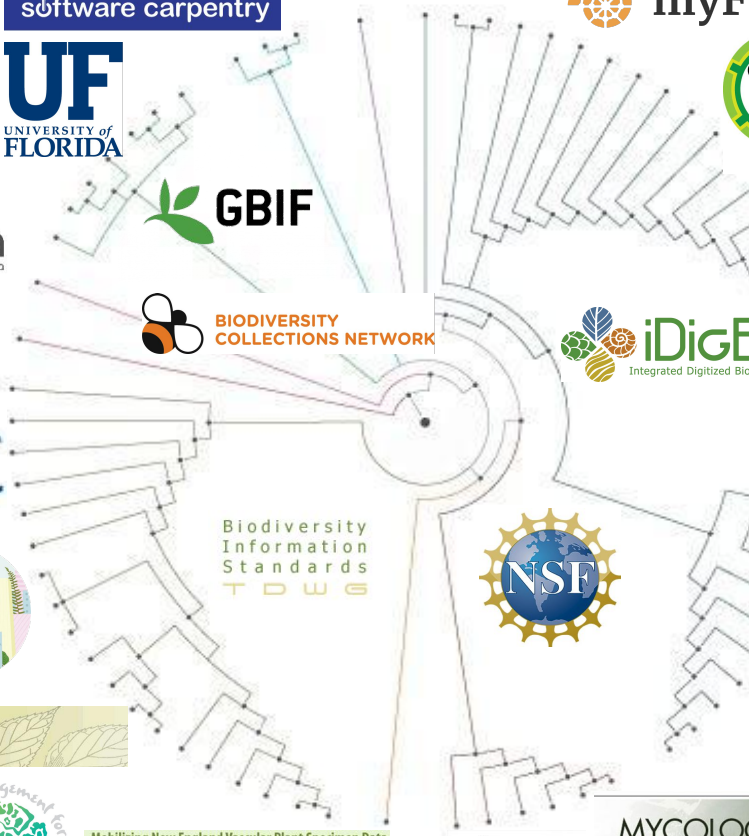
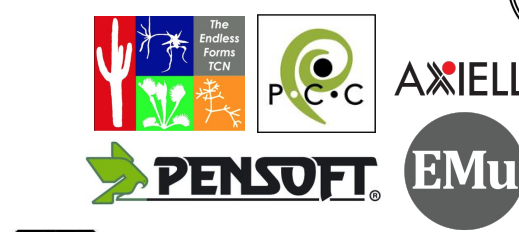
- Data Dryad
 - Curated resource making the data underlying scientific publications discoverable, freely reusable, and citable general-purpose home for a wide diversity of data types



- Figshare
 - online repository where researchers can preserve and share their research outputs, including figures, datasets, images, and videos.
#openData



DigIn • Lichens & Bryophytes
• Marine Mollusks • TORCH





iDigBio Resources



Jillian Goodwin
Conference Manager
jgoodwin@floridamuseum.ufl.edu



Molly Phillips
Education, Outreach, Diversity, & Inclusion
Coordinator
mphillips@flmnh.ufl.edu

Making data and images of millions of biological specimens available on the web

124,477,311
Specimen Records
34,476,876
Media Records
1,623
Recordsets

[Search the Portal](#)



Why digitization matters
More about what we do and why

 Digitization Learn, share and develop best practices	 Sharing Collections Documentation on data ingestion	 Working Groups Join in, contribute, be part of the community	 Proposals New tool and workshop ideas	 Citizen Scientists How can you help biological collections?
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Researchers
Learn about research directions



Collections Staff
Learn how your collection can benefit from our work



Teachers & Students
Download lesson plans about using digitized specimens



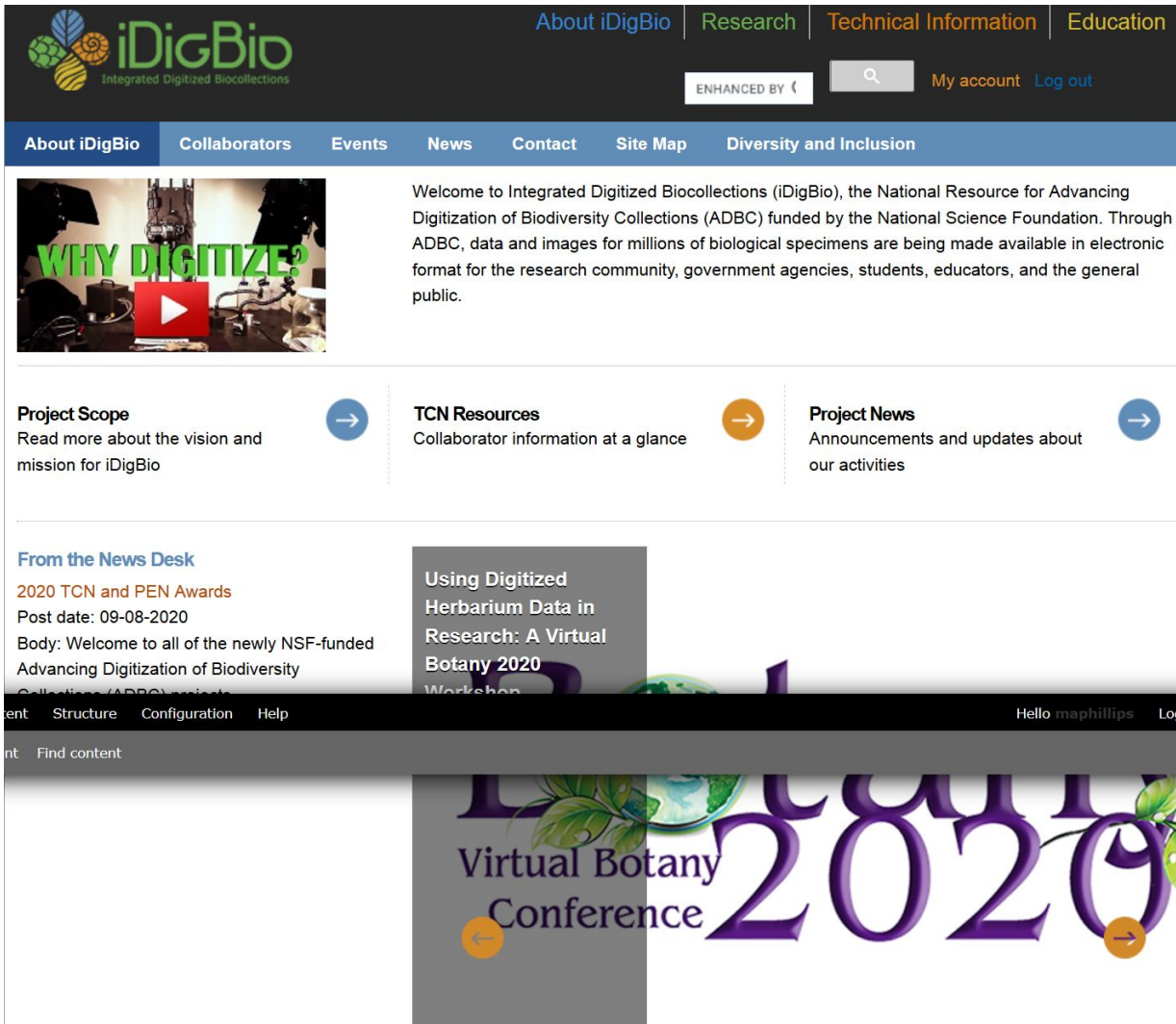
- Upcoming Events**
- Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World
09-15-2020
 - Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World
09-16-2020
 - Paleo Digitization Happy Hour
09-17-2020
 - Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World
09-17-2020
- [more events >>](#)

News
New Report: Biological Collections: Ensuring

2020 TCN and PEN Awards



Welcome to the ADBC Community!



The screenshot shows the iDigBio website homepage. At the top, there is a navigation bar with links for 'About iDigBio', 'Research', 'Technical Information', and 'Education'. Below this is a search bar and links for 'My account' and 'Log out'. A secondary navigation bar includes 'About iDigBio', 'Collaborators', 'Events', 'News', 'Contact', 'Site Map', and 'Diversity and Inclusion'. The main content area features a video player titled 'WHY DIGITIZE?' with a play button. Below the video are three sections: 'Project Scope' (Read more about the vision and mission for iDigBio), 'TCN Resources' (Collaborator information at a glance), and 'Project News' (Announcements and updates about our activities). A 'From the News Desk' section highlights a '2020 TCN and PEN Awards' post from 09-08-2020. A large banner for the 'Virtual Botany Conference 2020' is visible at the bottom, featuring a globe and stylized text.

General

- iDigBio and TCN info
- Code of Conduct
- Virtual meeting resources
- TCN Resources page
- Collaborators map
- ADBC proposal tips
- Staff Directory
- Calendar of upcoming events (workshops, webinars...)
- Diversity & Inclusion info
- News
- Event recaps
- Press releases
- Community announcements

Thematic Collections Networks

Researchers

[Browse our specimen portal](#)



Collections Staff

[Learn how your collection can benefit from our work](#)



Teachers & Students

[Learning resources & opportunities to engage](#)



Tue, 2011-10-04 14:31 -- [acisadmin](#)

Each Thematic Collections Network (TCN) is a network of institutions with a strategy for digitizing information that addresses a particular research theme, such as impacts of climate change or biota of a region. Once digitized, data are easily accessed and available for other research and educational use. Other institutions and collections may join an existing TCN as a Partner to Existing Network (PEN). The following are the TCNs, and any associated PENS, currently funded by the [Advancing Digitization of Biodiversity Collections](#) (ADBC) program:

Award Year 2020

- (TCN) [Building a global consortium of bryophytes and lichens: keystones of cryptobiotic communities](#)
- (TCN) [Mobilizing Millions of Marine Mollusks of the Eastern Seaboard \(ESB\)](#)
- (TCN) [Documenting Marine Biodiversity through Digitization of Invertebrate Collections \(DigIn\)](#)

Award Year 2019

- (TCN) [Digitizing collections to trace parasite-host associations and predict the spread of vector-borne disease \(TPT\)](#)
 - (PEN) [2020 Addition of the Yale Peabody Museum to the Terrestrial Parasite Tracker \(TPT\) Network](#)



- Wiki Home
- Workshop Summaries
- Working Group List
- Specimen Portal
- iDigBio Data Ingestion
 - Ingestion Queue Dashboard
 - Published data
 - Ingestion Guidance
 - Data API
 - Digitization Resources
 - iDigBio Working Groups
 - iDigBio Research
 - Navigation Tools
 - Tools

Page [Discussion](#)

[Read](#) | [Edit](#) | [View history](#) | [Delete](#) | [Move](#) | [Protect](#)

Documenting Marine Biodiversity through Digitization of Invertebrate Collections (DigIn)

Contents [\[hide\]](#)

- 1 Documenting Marine Biodiversity through Digitization of Invertebrate Collections (DigIn)
 - 1.1 Project Summary
 - 1.2 Current Research
 - 1.3 Project Websites & Social Media
 - 1.4 Citizen Science & Outreach Projects
 - 1.5 Project Leadership
 - 1.6 Project Collaborators
 - 1.6.1 Los Angeles County Museum of Natural History Foundation
 - 1.6.2 Florida Atlantic University
 - 1.6.3 College of William & Mary Virginia Institute of Marine Science
 - 1.6.4 Fish and Wildlife Research Institute
 - 1.6.5 American Museum Natural History
 - 1.6.6 University of California-San Diego Scripps Inst of Oceanography
 - 1.6.7 University of Colorado at Boulder
 - 1.6.8 Bernice P Bishop Museum
 - 1.6.9 University of Alabama Tuscaloosa
 - 1.6.10 Auburn University
 - 1.6.11 Santa Barbara Museum of Natural History
 - 1.6.12 University of Florida
 - 1.6.13 California Academy of Sciences
 - 1.6.14 Friends of the North Carolina State Museum of Natural Sciences
 - 1.6.15 Academy of Natural Sciences Philadelphia
 - 1.6.16 Harvard University
 - 1.6.17 University of Miami Rosenstiel School of Marine & Atmospheric Sciences
 - 1.7 Protocols & Workflows
 - 1.8 Publications
 - 1.9 Professional Presentations
 - 1.10 Other project documentation

Documenting Marine Biodiversity through Digitization of Invertebrate Collections (DigIn)[\[edit\]](#)

Project Summary[\[edit\]](#)

For two centuries, America has amassed an unparalleled collection of specimens from exploring the world's oceans. They were pulled up with nets, scooped up from seabeds with grabs, and hand-collected by divers, all contributing to a library of biodiversity that captures the state of life in the ocean - year after year, decade after decade. The broadest evolutionary scope of those collections is in the marine invertebrates, animals without backbones - sea stars, corals, worms, jellyfish, crabs, and thousands of other animals. That library of preserved marine invertebrates is our essential guide to the diversity of ocean life across the globe. And because they encapsulate data from the moment they were picked up, these institutional collections also act as a time machine, letting us use the past to understand how our present will become the future. But there is a problem - vast numbers of these specimens are essentially invisible outside of a tiny community of museum specialists. The only record of these specimens' existence is on labels enclosed in the jars with the preserved animals or in paper logbooks on a shelf. These specimens will remain nearly undiscoverable on museum shelves until their core descriptive information is made digitally available. Therefore, this project will create public digital records for over 7.5 million specimens from our nation's legacy of marine exploration, thereby making the immense investment in the specimens' acquisition available to 21st Century biodiversity and ecosystems research. Because these specimens provide a visible and tangible window into our oceans' enchanting biodiversity, this project will involve STEM educators and student educators in the digitization effort, so that they will be able to reflect their science experiences directly back to the classroom. The public will be involved virtually, by contributing transcription of specimen label data.

Digitization of alcohol-preserved marine specimens has never been carried out on this scale. A major challenge lies in the location of the data: written, typed, or printed on labels in the jars with the specimens. In many cases, that will require opening the jar, extracting the label, and either transcribing it directly or photographing it for later transcription - for hundreds of thousands of jars. The immediate participants in this program will digitize most or all of the marine invertebrate collections at nineteen institutions across the country, more than doubling the number of digital records for marine invertebrates in the U.S. All data will be publicly available through existing data portals, including iDigBio.org, using standardized data formats, thereby dramatically enhancing the accessibility of biodiversity data for comprehensive, systems-based analysis of ocean ecosystems.

Current Research[\[edit\]](#)

Project Websites & Social Media[\[edit\]](#)

DigIn TCN
□□
Quick Links
Project Summary
Current Research
Project Websites
Publications



Upcoming Events

Create New Event

Calendar View

Want to learn more about adding this calendar to your device? [Click here](#)

Filter by Event Type

iDigBio Events (Not meetings)

Reset

Event	Location	Event Date	Event Type
Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World	Zoom - See event above for room information.	09-15-2020	iDigBio Webinar
Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World	Zoom - See event above for room information.	09-16-2020	iDigBio Webinar
Paleo Digitization Happy Hour	https://fsu.zoom.us/j/94496003231	09-17-2020	iDigBio Webinar
Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World	Zoom - See event above for room information.	09-17-2020	iDigBio Webinar
2020 ADBC Summit	Zoom	09-22-2020 to 09-25-2020	iDigBio Workshop
Open Office Hours hosted by the API User Group (R-based)	https://fsu.zoom.us/j/97729921303	09-23-2020	iDigBio Webinar
Finding Field Station Data for Research Use: A virtual mini-workshop		09-29-2020	iDigBio Webinar, iDigBio Workshop, iDigBio Webinar, iDigBio Workshop
Education, Outreach, Diversity and Inclusion Open Office Hours	https://ufl.zoom.us/my/idigbio.eodi	10-01-2020	iDigBio Webinar
Paleo Digitization Happy Hour	https://fsu.zoom.us/j/94496003231	10-08-2020	iDigBio Webinar
Open Office Hours hosted by the API User Group (R-based)	https://fsu.zoom.us/j/97729921303	10-14-2020	iDigBio Webinar
Paleo Digitization Happy Hour	https://fsu.zoom.us/j/94496003231	10-22-2020	iDigBio Webinar
Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World	Zoom - See event above for room information.	10-27-2020	iDigBio Webinar
Open Office Hours hosted by the API User Group (R-based)	https://fsu.zoom.us/j/97729921303	10-28-2020	iDigBio Webinar
2020 Internal Advisory Committee Meetings	UF Building 105, Room 310 (Gainesville, FL) https://ufl.zoom.us/my/idigbiotcn	11-04-2020	



<https://www.idigbio.org/content/webinar-series-adapting-covid-resources-natural-history-collections-new-virtual-world>



Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World

July 28: Planning for Virtual Events: Lessons learned from Digital Data & SPNHC Conference Planners

August 25: Executing Virtual Events: Lessons learned from Digital Data & SPNHC Conference Planners

September 15-17: Taking the Pulse of Natural History Collections During COVID-19 Series: Where are we now?

October 27: Virtual Project Management, Tips and Tools

Speakers: Diego Barroso; Project Manager TORCH TCN, BRIT, Jen Zaspel; Terrestrial Parasite Tracker Lead PI & David Jennings, Project Manager, iDigBio

November 18: Engaging Public Participation in Collections Digitization

Speakers: Austin Mast; iDigBio, Florida State University & Katie Pearson, Project Manager California Phenology TCN



Broadening Representation in Biology

Tue, 2018-02-20 10:14 -- maphillips



Hello maphillips Log

Just like in all other STEM disciplines, the biodiversity sciences has a human diversity, inclusion, equity, and access problem. iDigBio feels strongly that diversity is a strength and that we all have work to do to make the biodiversity community a welcoming, inclusive, and safe environment for all. iDigBio is committed to doing our part to directly support marginalized people in biology, specifically BLAANA (Black/African-American, Latinx, Asian, Arab, and Native American) as well as other under-represented people in STEM while also working with our community to create change. We are working to do so through multiple initiatives:

iDigTRIO Biological Sciences Career Conference and Fair

iDigBio and the **Office of Academic Support (OAS)** and **Student Support Services (SSS)/TRIO Program** at University of Florida (UF) have co-organized a free Biology Career Conference and Fair since 2019. The goal of this event is to give students the chance to



iDigBio Code of Conduct

Tue, 2019-09-17 11:33 -- javarkas

Researchers

[Browse our specimen portal](#)



Collections Staff

[Learn how your collection can benefit from our work](#)



Teachers & Students

[Learning resources & opportunities to engage](#)



This Code of Conduct is a living document. We value your insights, feedback and comments. Please send comments and suggested edits to Molly Phillips mphillips@flmnh.ufl.edu

iDigBio has been providing professional development, resources, and community for biodiversity digitization since 2011. Each year, iDigBio hosts the ADBC Summit and organizes dozens of in-person and virtual events. The iDigBio website hosts a variety of community and internally generated content such as workflows, reports, and blog posts. iDigBio also facilitates several active email listservs and social media accounts.

iDigBio values the diversity of views, expertise, opinions, backgrounds, and experiences reflected among our ADBC partners and the broader biodiversity sciences community and is committed to providing a safe, productive, and welcoming environment for all participants of iDigBio-facilitated meetings, events, and virtual spaces. iDigBio-facilitated meetings and events can serve as an effective forum to consider and debate science-relevant viewpoints in an orderly, respectful, and fair manner. This Code of Conduct is important for promoting




About iDigBio | **Research** | Technical Information | Education

Google Cust My account Log out

Research | Portal Home | Research Collaboration | Learning Center | Genetic Resources



Looking for research ideas?


Read the monthly [Research Spotlight](#), and if you have a contribution, [contact us!](#)


Watch the presentations and read discussions from the iDigBio workshop [Using Biodiversity Specimen-Based Data to Study Global Change](#).

Be enlightened by speakers at the Ecological Society of America 2016 session [Leveraging the Power of Biodiversity Specimen Data for Ecological Research](#).

Learn about Biodiversity Information Standards by [watching the talks](#) from the 2016 annual TDWG meeting.

Discuss [open research project ideas on GitHub](#) with iDigBio and collaborators.

Researchers 
Looking for biological collections data? Browse the iDigBio specimen portal.

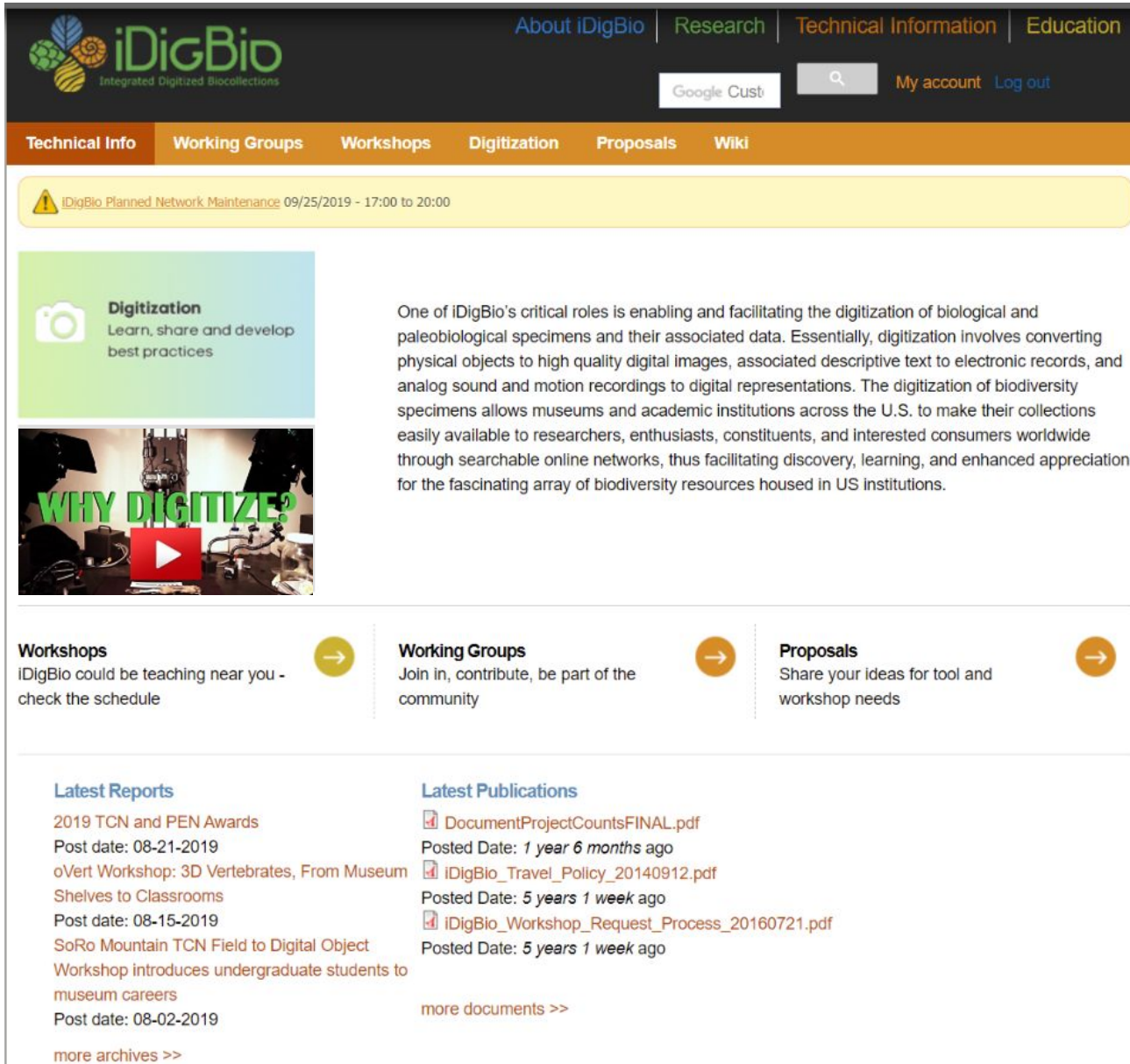
Collections Staff 
Learn how your biological collections might benefit from iDigBio

Teachers & Students 
Learning resources & opportunities to engage and excite!



Research

- Monthly Research Spotlights
- List of genetic repositories
- Links to ADBC research
- Tutorials
- API information
- iDigBio R package
- Research tools
- Collaborators
- Links to GitHub



The screenshot shows the iDigBio website's 'Technical Information' page. At the top, there is a navigation bar with links for 'About iDigBio', 'Research', 'Technical Information', and 'Education'. Below this is a search bar and links for 'My account' and 'Log out'. A secondary navigation bar highlights 'Technical Info' and includes links for 'Working Groups', 'Workshops', 'Digitization', 'Proposals', and 'Wiki'. A yellow banner at the top of the main content area announces 'iDigBio Planned Network Maintenance 09/25/2019 - 17:00 to 20:00'. The main content area features a 'Digitization' section with a camera icon and the text 'Learn, share and develop best practices'. Below this is a video player titled 'WHY DIGITIZE?' showing a laboratory setting. To the right of the video is a paragraph explaining the role of digitization in biological and paleobiological specimens. Below the video and paragraph are three sections: 'Workshops' (teaching near you), 'Working Groups' (join in, contribute), and 'Proposals' (share ideas). At the bottom, there are two columns: 'Latest Reports' and 'Latest Publications', each listing recent documents with their dates and titles.

Technical Information

- Working group information
- Digitization workflows
- Equipment recommendations
- Workshop summaries
- Workshop and webinar recordings
- Data ingestion guidance

Digitization Resources

This page provides resources and information for the series of digitization training workshops being conducted by iDigBio as well as a plethora of digitization information and resources. Included is a growing list of links to documents, websites, videos, presentations, and other important information related to biological collection digitization.

Contents [\[hide\]](#)

- 1 [iDigBio Introduction](#)
- 2 [Recommendations for the Acquisition, Processing, and Archiving of Digital Media](#)
- 3 [Interest/Working Groups](#)
- 4 [Digitization Avenue](#)
- 5 [iDigBio Workshops, Reports, and Wikis](#)
- 6 [Videos- Digitization Resources and Workflows](#)

[iDigBio Introduction](#)[\[edit\]](#)



More than 1,600 natural history collections across the United States house over 1 billion biological specimens ranging from fungi to fish to fossils. This video describes the iDigBio project. It explains why digitized information and ready access to it are important, provides an overview of the digitization process and highlights some of the challenges faced when working with different types of natural history collections.

[Recommendations for the Acquisition, Processing, and Archiving of Digital Media](#)[\[edit\]](#)

iDigBio has created recommendations for capturing, processing, and storing digital media.


[Recommendations for the Acquisition, Processing, and Archiving of Digital Media](#)

[Interest/Working Groups](#)[\[edit\]](#)

The following links take you to Interest/Working Groups focused on Digitization. For other working groups please use the following link [iDigBio Working Groups](#)

- [International Whole-Drawer Digitization Interest Group](#)
- [NANSH Working Group \(North American Network of Small Herbaria\)](#)
- [Fluid-preserved Arthropod and Microscopic Slide Imaging Interest Group](#)
- [Paleontology Digitization Working Group](#)
- [Small Collections Network Working Group](#)
- [Vertebrate Digitization Interest Group](#)
- [Field Station Interest Group](#)

Digitizing the Past and Present for the Future




iDigBio
Integrated Digitized Biocollections

Digitization


How to digitize? (Five clusters)	Workshops and Symposia
Digitization Videos	Biblio entries

Connect with iDigBio

Specimen Portal	Upcoming Events
iDigBio on facebook	Follow iDigBio on twitter



FEEDBACK



FEEDBACK



! iDigBio Planned Network Maintenance: 09/25/2019 - 17:00 to 20:00



Education and Outreach are critical components of iDigBio's overall mission to highlight the importance of biodiversity collections and digitization efforts. E&O efforts include engaging the public through informational resources, compelling deliverables and opportunities to participate. In addition, iDigBio is with its partners in developing biodiversity and digitization-related educational resources for K-12, fostering public participation activities for life-long learners, and providing links to educational resources and activities.

iDigBio in the classroom
K-12 Lesson plans and more



Undergraduate Resources
Online biodiversity resources for students and educators



Citizen Scientist
How can you get involved with digitization?



Learn more and get involved through the **iDigBio Education and Outreach Working Group.**



Sat, 2013-12-28 09:59 -- kevinlove
ADBC Educational Resources

- **The Portal:** Search through millions of records from natural history collections from around the world. New to the iDigBio Portal?
 - Watch a video tutorial created by Teresa Mayfield
 - Download a written tutorial on how to search for a species
 - Visit the Portal's [Learning Center](#) to find more resources
- Find **modules and lesson plans** related to natural history collections for:
 - K-12
 - Undergraduates



Resources Across ADBC

PaleoNICHES & Cretaceous World TCNs: Digital Atlas of Ancient Life: Get digital atlases for fossils from the Ordovician, Pennsylvanian, Cretaceous, and Neogene, find fossil guides, access a Digital Encyclopedia of Ancient Life

Education

- Links to ADBC educational products
- Link to Collections Educational Materials Portal
- Diversity and Inclusion
- Monthly Biodiversity Spotlights
- Portal Curiosities
- Coding Corner
- K-12 lesson plans
- Undergraduate modules
- Information about Citizen Science
- Educational collaborators

Find content

Researchers

Browse our specimen portal



Collections Staff

Learn how your collection can benefit from our work



Teachers & Students

Learning resources & opportunities to engage



wed, 2015-10-21 11:42 -- maphillips

Collections-Based Online Resources for Undergraduate Students and Educators

Natural History Collections Portal




This [portal](#) is supported by [QUBES](#) and aggregates educational resources from [BLUE](#), [iDigBio](#), and others, and is owned by [SPNHC](#). Want to publish a resource? Reach out to us [here](#).

WeDigFLPlants SC.912.CS-PC.4 citizen science, biodiversity, Help behind-the-scenes at a museum, herbarium, plants SC.912.N.1.4 museum as a citizen scientist


 [iDigBio Planned Network Maintenance](#) 09/25/2019 - 17:00 to 20:00

Citizen Scientist


Researchers

Browse our specimen portal 

Collections Staff

Learn how your collection can benefit from our work 

Teachers & Students

Learning resources & opportunities to engage 

Fri, 2013-12-27 14:11 -- [kevinlove](#)

Public engagement in scientific research (sometimes referred to as citizen science) is not new, but new web resources (e.g., from the [Zooniverse](#), [Cornell Lab of Ornithology](#), and [USA National Phenology Network](#) suites of projects) provide scientists with opportunities to engage the public in ways and at scales not previously possible. At the same time, the public is increasingly provided with opportunities to learn how to do science and, in some cases, co-design and implement the experiments with scientist partners (e.g., with functionality at [CitSci.org](#)). This is leading to a democratization of science, in which the public has a more direct role in doing research meaningful to them (e.g., determining floristic changes in a local natural area).

Many of the current ecological/environmental citizen science projects focus on generating present-day occurrence data on populations, species, and communities. Biodiversity research collections (biocollections) represent an opportunity to produce complementary historical baseline data on distributions using the roughly 1 billion specimens in U.S. institutions collected over the past 250 years. However, information about a majority of those specimens has yet to be digitized and made available to the world online. iDigBio is working to enable the creation of this digital historical baseline in many ways, including ways that engage the public in the digitization of specimens that are most relevant to the contributor's interests. Engaging the public in digitization intersects in powerful ways with iDigBio's Education and Outreach goals, as well its Digitization, Cyberinfrastructure, and Research goals.



This year, iDigBio is excited to partner with other projects to produce the inaugural [Worldwide Engagement for Digitizing Biocollections \(WeDigBio\) Event](#)—a potentially huge boost for engaging the public in digitization and increasing science literacy in this domain. The event's core leadership team includes researchers from Florida State University, Smithsonian Institution, University of Florida's Florida Museum of Natural History, Australian Museum, and the major online transcription platforms,

including the U.S.-based [Smithsonian Transcription Center](#), [Zooniverse Notes from Nature](#), and [Symbiota](#), the Australia-based [DigiVol](#), the UK-based [Herbaria@Home](#), and the France-based



benefit from our work

Teachers & Students
Learning resources &
opportunities to engage



Outreach Materials created through ADBC

Are you looking for outreach materials to help engage with people about biodiversity, digitization, or iDigBio?



Libraries of Life Collection Cards were created by the iDigBio Augmented Reality Public Education/Outreach Working Group. The fifteen cards each feature a different project funded by NSF's Advancing Digitization of Biodiversity Collections program, and each card launches a 3D model in the mobile device's viewer that brings specimens to life for the public. The cards are available

to download and print **through the app**, and further resources are available at www.libraries-of-life.org, including educational materials.

The [MicroFungi Portal](#) also has an [outreach page](#) that has educational videos and articles about early mycologists.

Citizen/Community Science

The SoRo TCN has created an [iNaturalist project](#) for citizen scientists to help document the biodiversity at the Rocky Mountain Biological Laboratory.

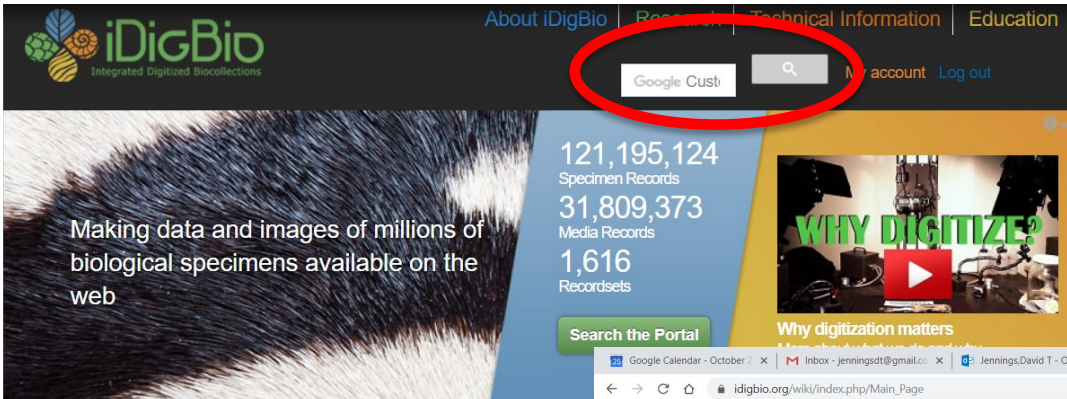
Notes from Nature Outreach Activity: [Notes from Nature](#) is an excellent outreach tool because people can directly participate in the digitization of museum collections. The website hosts multiple collections at all times and is fun and easy to use. iDigBio has created [an activity](#) intended for a tabling event --- for a general, or younger audience. We used this activity with Girl Scouts, but it could be easily adapted for other groups. Visit the [K-12 page](#) to find Notes from Nature activities meant for formal education.

Outreach Videos

One of the members of the [Mid-Atlantic Megalopolis TCN](#) has created a [3-video series](#) on the importance of digitization and collections.

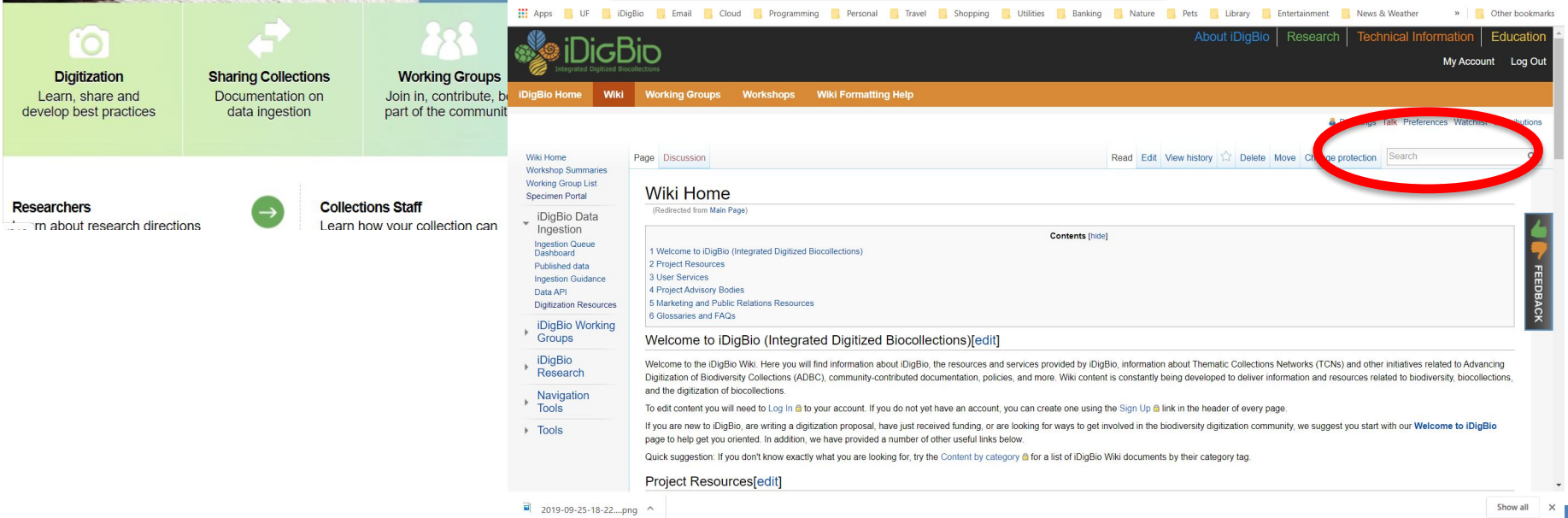


I can't find X, or I want to know about Y



The image shows the top navigation bar of the iDigBio website. The search bar contains the text "Google Cust" and is circled in red. To its right are links for "My account" and "Log out". Below the navigation bar, there is a large image of a biological specimen (possibly a fur sample) with the text "Making data and images of millions of biological specimens available on the web". To the right of this image, statistics are displayed: "121,195,124 Specimen Records", "31,809,373 Media Records", and "1,616 Recordsets". A "Search the Portal" button is located below these statistics. A video thumbnail titled "WHY DIGITIZE?" is also visible.

Use the search boxes!



This screenshot shows the iDigBio Wiki page. The search bar at the top right is circled in red. The page content includes a "Wiki Home" section with a table of contents and a "Welcome to iDigBio" message. The table of contents lists: 1 Welcome to iDigBio (Integrated Digitized Biocollections), 2 Project Resources, 3 User Services, 4 Project Advisory Bodies, 5 Marketing and Public Relations Resources, and 6 Glossaries and FAQs. The welcome message states: "Welcome to the iDigBio Wiki. Here you will find information about iDigBio, the resources and services provided by iDigBio, information about Thematic Collections Networks (TCNs) and other initiatives related to Advancing Digitization of Biodiversity Collections (ADBC), community-contributed documentation, policies, and more. Wiki content is constantly being developed to deliver information and resources related to biodiversity, biocollections, and the digitization of biocollections." It also provides instructions on how to edit content and a quick suggestion to use the Content by category link.



About 2,110 results (0.27 seconds)

[Webinar: Towards user-definable, semi-automated workflows for ...](https://www.idigbio.org/.../webinar-towards-user-definable-semi-automated-workflows-curating-biodiversity-data)
<https://www.idigbio.org/.../webinar-towards-user-definable-semi-automated-workflows-curating-biodiversity-data>

In the FilteredPush project, we have developed automated **workflows** for quality control of biodiversity data, first as proof-of-concept desktop software in the ...

[Digitization Workflows | iDigBio](https://www.idigbio.org/content/digitization-workflows)
<https://www.idigbio.org/content/digitization-workflows>
 Jun 10, 2012 ... Efficient and effective **workflows** are at the heart of successful biological and paleontological collections digitization. Much work has been done ...

[Workflow Modules and Task Lists | iDigBio](https://www.idigbio.org/content/workflow-modules-and-task-lists)
<https://www.idigbio.org/content/workflow-modules-and-task-lists>
 Aug 24, 2012 ... One outgrowth of the DROID (Developing Robust Object-to-Image-to-Data) **workflow** workshop held in May 2012 was the establishment of a ...

[Workflow | iDigBio](https://www.idigbio.org/tags/workflow)
<https://www.idigbio.org/tags/workflow>
 Mass Digitizing a Working Herbarium using a conveyor belt: **Workflows**, Strategies, ...
 Webinar: Towards user-definable, semi-automated **workflows** for curating ...

[Workflows | iDigBio](https://www.idigbio.org/tags/workflows)
<https://www.idigbio.org/tags/workflows>
 This session at GSA 2016 will focus on paleontology/geo databases, data standards related to paleontology, and mobilization of research-quality paleontology ...

[Developing Robust Object to Image to Data Workflows Workshop...](https://www.idigbio.org/.../developing-robust-object-image-data-workflows-workshop)
<https://www.idigbio.org/.../developing-robust-object-image-data-workflows-workshop>
 Developing Robust Object to Image to Data (DROID) **Workflows** Workshop. Building 105,

Wiki Home
 Workshop Summaries
 Working Group List
 Specimen Portal

▼ iDigBio Data
 Ingestion
 Ingestion Queue Dashboard
 Published data
 Ingestion Guidance
 Data API
 Digitization Resources

▶ iDigBio Working Groups

▶ iDigBio Research

▶ Navigation Tools

▶ Tools

Special page

Search results

[Content pages](#) [Multimedia](#) [Help and Project pages](#) [Everything](#) [Advanced](#)

Create the page "Workflows" on this wiki!

Page title matches

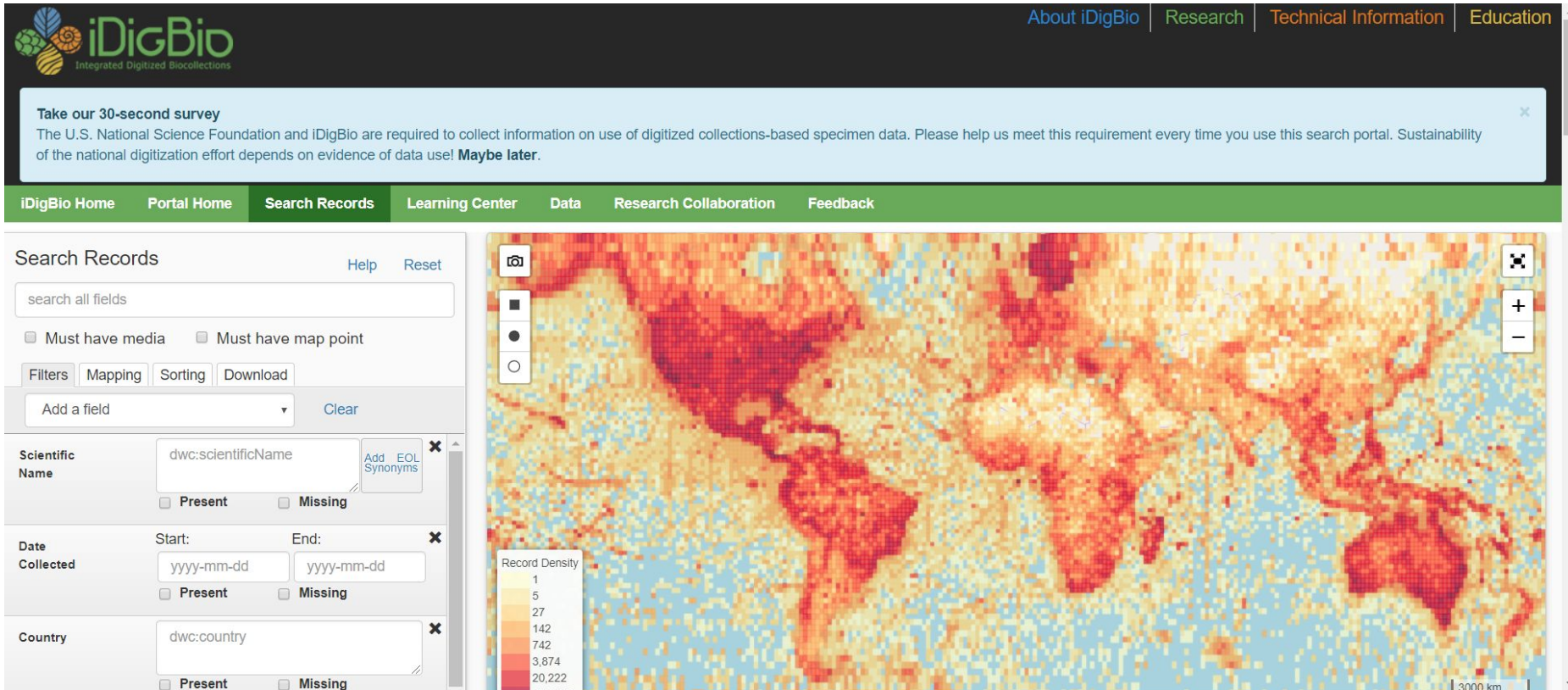
[Collections Digitization Workflows](#)
 ...ributions of existing **workflows** and protocols are encouraged, whether such **workflows** were developed by the contributor or discovered while searching the internet ...s://www.idigbio.org/content/digitization-workflows iDigBio's Collaborative **Workflows** Page] ==
 3 KB (387 words) - 07:47, 7 May 2015

[OCR / NLP Workflows](#)
 4 KB (581 words) - 10:15, 25 August 2014

[Digitization Workflows and Protocols](#)
 ...utions we visited. The following links provide information on Digitization **Workflows** and Protocols. * [http://tcn.amnh.org/documents **Workflows**, protocols, etc. from Tri-



Flexible search across all data, indexed fields, media, and geolocations



Take our 30-second survey
 The U.S. National Science Foundation and iDigBio are required to collect information on use of digitized collections-based specimen data. Please help us meet this requirement every time you use this search portal. Sustainability of the national digitization effort depends on evidence of data use! **Maybe later.**

Search Records Help Reset

search all fields

Must have media Must have map point

Filters Mapping Sorting Download

Add a field Clear

Scientific Name Add EOL Synonyms

Present Missing

Date Collected Start: End:

Present Missing

Country

Present Missing

Record Density

1
5
27
142
742
3,874
20,222
405,550

3000 km



Get Involved!



Alyncea Blackwell "Allie"
Project Assistant
ablackwell@floridamuseum.ufl.edu



Step 1: Sign up for the iDigBio Newsletter

- TCN and digitization news
- Upcoming workshops and webinars
- Event recaps
- Articles featuring innovative collections-based research
Biodiversity Spotlights



<https://www.idigbio.org/newsletter-subscribe>

Step 2: Social media



vimeo.com/idigbio

idigbio.org/rss-feed.xml

idigbio.org/events-calendar/export.ics

www.idigbio.org/wiki



Step 3: Get involved with a Community Working Group

iDigBio Home | Wiki | Working Groups | Workshops | Wiki Formatting Help

Wiki Home | Discussion

Workshop Support | Working Groups | Specimens

iDigBio Working Groups

- 1 Overview
- 2 Forming or Dissolving a Working/Interest Group
- 3 Active Working Groups
 - 3.1 Arctos Working Group
 - 3.2 Augmented Reality Public Education/Outreach Working Group (ARPEO)
 - 3.3 Augmenting OCR (aOCR)
 - 3.4 Biodiversity Collection Management Solutions Working Group
 - 3.5 Biodiversity Informatics Management (BIM) Working Group
 - 3.6 Data Management Interest Group (DMI)
 - 3.7 Developing Robust Object to Image to Data (DROID)
 - 3.7.1 DROID1: Flat Sheets and Packets
 - 3.7.2 DROID2: Pinned Specimens in Trays and Drawers
 - 3.7.3 DROID3: Things in Spirits
 - 3.7.4 DROID4: 3D objects in Trays
 - 3.8 Education & Outreach (E&O)
 - 3.9 Fluid-preserved Arthropod and Microscopic Slide Imaging Interest Group
 - 3.10 Georeferencing Working Group (GWG)
 - 3.11 Integrating Collections and Ecological Research (ICER)
 - 3.12 International Whole-Drawer Digitization Interest Group (WDD)
 - 3.13 Interoperability for Public Participation in Digitization (CitSciInterop)
 - 3.14 North American Network of Small Herbaria Working Group (NANSH)



- Documentation
- API development
- Workflows
- Standards
- Best practices
- Hackathons
- Workshops, Webinars

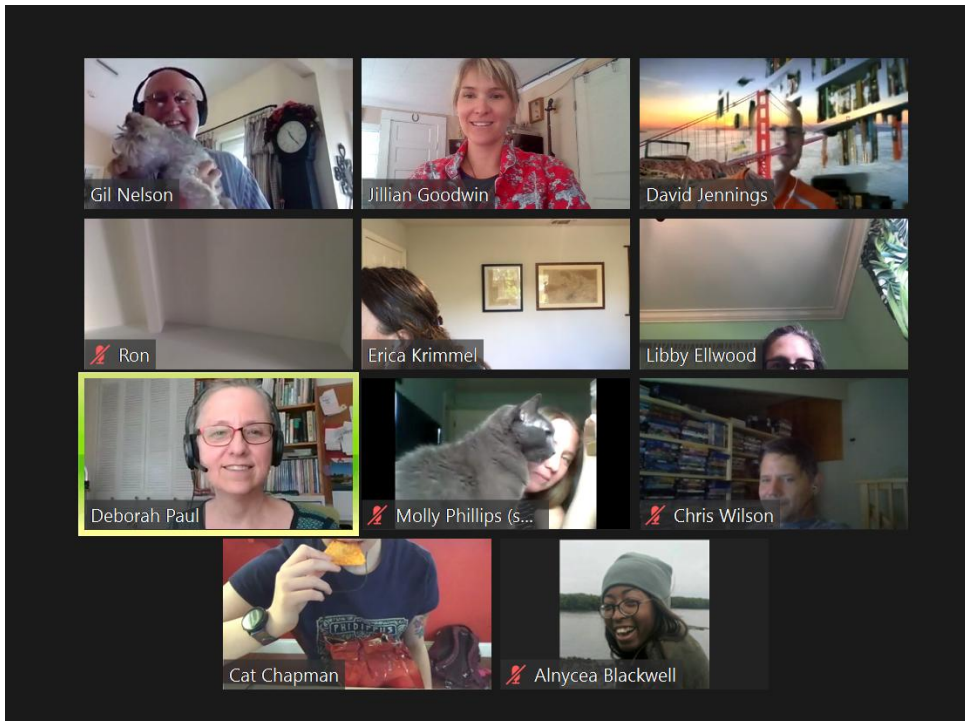




Step 4: Watch a webinar...or star in one!

<https://www.idigbio.org/tags/webinar>

https://www.idigbio.org/wiki/index.php/Web_Conferencing



Workshops
Symposia
Webinars

preferably with a microphone!



Step 5: Contribute to the iDigBio website

- Submit an article for the **Research Spotlight**
- Write an article about **your project**
- Contribute your **workflows**
- **Update** your individual TCN wiki pages
- Write about your **iDigBio experience**
- Post an **event**
- Share education/outreach **resources**

Bering Land Bridge and the MyCoPortal

Contributed by: Teresa Iturriaga, Rhianna Baldree, Alex Kuhn, Andrew Miller



Mycologists long to collect areas remote to most men where fungi today may thrive keeping plants, trees, and cycles alive.

Bridges are to their liking since one can go underneath connecting with what lies beneath. About fungi this is most striking.

In summer some may float if the bridge is over a moat. Fungi are versatile and persistent to new niches they aren't resistant.



<https://qubeshub.org/community/groups/collections>

Digital Atlas of Ancient Life
PALEONTOLOGICAL RESEARCH INSTITUTION

HOME FIELD GUIDES APP DIGITAL ENCYCLOPEDIA VIRTUAL COLLECTION TEACHING RESOURCES UPDATE...

Welcome to the Digital Atlas of Ancient Life

Digital Atlas of Ancient Life | Exploring the Diversity and History ...

Jonathan Hendricks
Version: 1.0

Evolution, biology, idi... 113 35 0 0 06.2020

Sungazer lizard
by Blackburn Lab

Origin and Diversity of Armor in Girdled Lizards

Jennifer Broo
Version: 1.0

Evolution, phylogenet... 232 75 0 0 05.2020

That Vertebrate Ate What Exactly?

Jason Horner
Version: 1.0

Evolution, idigbio, AP ... 212 39 0 0 05.2020

Evidence of Evolution Homologous Structures

Bridget Armstrong
Version: 1.0

Evolution, idigbio, Zo... 110 47 0 0 05.2020

Diving into Deep Sea Data

Adania Flemming, Randy Singer, Molly Phillips
Version: 1.0

Querying databases, ... 214 69 0 0 04.2020

Using Digitized Collections-Based Data in Research: A Hands-On Cras...

Blaine Marchant
Version: 1.0

ecology lab, biodivers... 468 38 0 0 04.2020



Step 6: Get interviewed for Scientist in the Spotlight



Diego Barroso,
project manager of
the TORCH TCN. He
was featured in the
September 2020
issue

- Be featured in the Scientist in the Spotlight segment
- a monthly segment on the newsletter and website
- highlights the scientists working in the ADBC community



Step 7: Use the portal for research and data cleaning – feedback!

data@idigbio.org

Family	Scientific Name	Date Collected	Country	Institution Code
"	"	1997-11-14	Brasil	IAC
Unplaced	"Acer" knowltoni	no data	United States	UF
Hamamelidaceae	"Acer" (Liquidambar) lesqueureuxi	no data	United States	UCMP
Hamamelidaceae	"Acer" (Liquidambar) lesqueureuxi	no data	United States	UCMP
Achatinellidae	"achatinea" sp.	no data	no data	NHMK
Achatinellidae	"achatinea" sp.	no data	no data	NHMK
Achatinellidae	"achatinea" sp.	no data	no data	NHMK
Unplaced	"Almont samara"	no data	United States	UF
Unplaced	"Almont samara"	no data	United States	UF

Recordset

Data Corrected | Data Use | Raw

This table shows any data corrections that were performed on this recordset to improve the capabilities of iDigBio Search. The first column represents the correction performed. The last two columns represent the number and percentage of records that were corrected. A complete list of the data quality flags and their descriptions can be found here. Clicking on a data flag name will take you to a search for all records with this flag in this recordset.

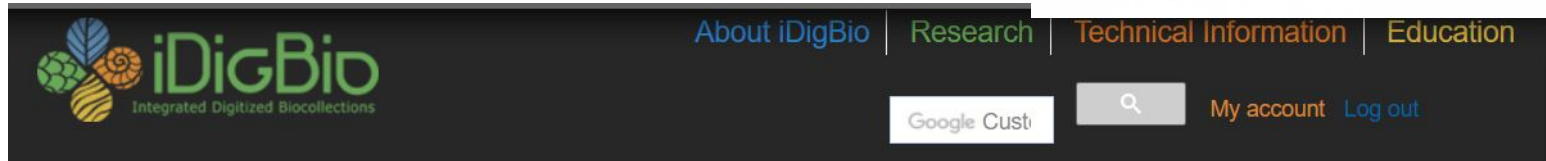
Flag	Records With This Flag	(%) Percent With This Flag
idigbio_isocountrycode_added	67961	98.832
dwc_continent_added	67932	98.79
geopoint_datum_missing	60241	87.605
dwc_datasetid_added	15170	22.061
dwc_kingdom_added	15170	22.061
dwc_parentnameusageid_added	15170	22.061
dwc_taxonid_added	15170	22.061
dwc_taxonomicstatus_added	15170	22.061
dwc_taxonrank_added	15170	22.061
gbif_canonicalname_added	15170	22.061
gbif_genericname_added	15170	22.061
gbif_taxon_corrected	15170	22.061
dwc_phylum_added	14947	21.737
dwc_scientificnameauthorship_added	14714	21.398
dwc_class_added	14460	21.028
dwc_multimedia_added	8706	12.661
taxon_match_failed	8593	12.496
dwc_order_replaced	8162	11.87
gbif_vernacularname_added	7878	11.457



Step 8: Collaborate!



BIODIVERSITY COLLECTIONS NETWORK



! iDigBio Planned Network Maintenance 09/25/2019 - 17:00 to 20:00



- Researchers**
Browse our specimen portal →
- Collections Staff**
Learn how your collection can benefit from our work →
- Teachers & Students**
Learning resources & opportunities to engage →

iDigBio Collaborations Enabling Research

Thu, 2014-07-24 16:15 -- ammatsum

To facilitate the study of biodiversity, a number of software products are being collaboratively developed with researchers and projects. These websites, tools, and workflows take advantage of the data being digitized at US and global institutions and made available by iDigBio through our data services. Many other tools and services can be found through the Biodiversity Catalogue. If you have a great idea, contact us or submit a proposal!



WordPress Leaflet Map Plugin Using iDigBio Data

iDigBio has collaborated with the Atlas of Ordovician Life project, part of the PALEONICHES-TCN to create a mapping plugin for WordPress that can generate maps of iDigBio specimen data on the fly. Leaflet Map enables map generation within WordPress webpages, and Leaflet iDigBio geojson data plugin developed by iDigBio enables an API query to iDigBio specimen occurrence coordinates. An example of the information about the plugin is available at <https://github.com/iDigBio/geojson>.



Biodiversity Information Standards TDWG





TCN Responsibilities



David Jennings
Project Manager
djennings@flmnh.ufl.edu



TCN Responsibilities, Part 1

1. Maintain a TCN wiki page

- <https://www.idigbio.org/wiki/index.php/TCNs>
- Have your PM email us to get an account

2. Submit requested info for the annual Summits

3. Provide feedback via annual community survey and other solicitations

4. Prepare annual report for NSF

- Are you the lead institution or not? R.T.F.D.
- https://www.idigbio.org/wiki/images/3/34/ADBC_AnnualReportInfoSheet.pdf



TCN Responsibilities, Part 2

5. Participate in quarterly TCN meetings

- Feb, May, Aug, and Nov on first Wed @ 2:00 PM Eastern; minutes published on wiki
- <https://www.idigbio.org/content/2020-internal-advisory-committee-meetings>

6. Submit quarterly reports to iDigBio

- Due by the quarterly meeting; published on wiki
- <https://www.idigbio.org/content/tcn-quarterly-progress-report-idigbio>
- Have your PM email us to get an account



[https://www.idigbio.org/wiki/index.php/Documenting_Marine_Biodiversity_through_Digitization_of_Invertebrate_Collections_\(DigIn\)](https://www.idigbio.org/wiki/index.php/Documenting_Marine_Biodiversity_through_Digitization_of_Invertebrate_Collections_(DigIn))

[Djennings](#) [Talk](#) [Preferences](#) [Watchlist](#) [Contributions](#)

- Wiki Home
- Workshop Summaries
- Working Group List
- Specimen Portal
- ▼ iDigBio Data Ingestion
 - Ingestion Queue Dashboard
 - Published data
 - Ingestion Guidance
 - Data API
 - Digitization Resources
- ▶ iDigBio Working Groups
- ▶ iDigBio Research
- ▶ Navigation Tools
- ▶ Tools

Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [Delete](#) [Move](#) [Protect](#)

Documenting Marine Biodiversity through Digitization of Invertebrate Collections (DigIn)

Contents [\[hide\]](#)

- 1 Documenting Marine Biodiversity through Digitization of Invertebrate Collections (DigIn)
 - 1.1 Project Summary
 - 1.2 Current Research
 - 1.3 Project Websites & Social Media
 - 1.4 Citizen Science & Outreach Projects
 - 1.5 Project Leadership
 - 1.6 Project Collaborators
 - 1.6.1 Los Angeles County Museum of Natural History Foundation
 - 1.6.2 Florida Atlantic University
 - 1.6.3 College of William & Mary Virginia Institute of Marine Science
 - 1.6.4 Fish and Wildlife Research Institute
 - 1.6.5 American Museum Natural History
 - 1.6.6 University of California-San Diego Scripps Inst of Oceanography
 - 1.6.7 University of Colorado at Boulder
 - 1.6.8 Bernice P Bishop Museum
 - 1.6.9 University of Alabama Tuscaloosa
 - 1.6.10 Auburn University
 - 1.6.11 Santa Barbara Museum of Natural History
 - 1.6.12 University of Florida
 - 1.6.13 California Academy of Sciences
 - 1.6.14 Friends of the North Carolina State Museum of Natural Sciences
 - 1.6.15 Academy of Natural Sciences Philadelphia
 - 1.6.16 Harvard University
 - 1.6.17 University of Miami Rosenstiel School of Marine & Atmospheric Sciences
 - 1.7 Protocols & Workflows
 - 1.8 Publications
 - 1.9 Professional Presentations
 - 1.10 Other project documentation

[Documenting Marine Biodiversity through Digitization of Invertebrate Collections \(DigIn\)](#)[\[edit\]](#)

Project Summary[\[edit\]](#)

For two centuries, America has amassed an unparalleled collection of specimens from exploring the world's oceans. They were pulled up with nets, scooped up from seabeds with grabs, and hand-collected by divers, all contributing to a library of biodiversity that captures the state of life in the ocean - year after year, decade after decade. The broadest evolutionary scope of those collections is in the marine invertebrates, animals without backbones - sea stars, corals, worms, jellyfish, crabs, and thousands of other animals. That library of preserved marine invertebrates is our essential guide to the diversity of ocean life across the globe. And because they encapsulate data from the moment they were picked up, these institutional collections also act as a time machine, letting us use the past to understand how our present will become the future. But there is a problem - vast numbers of these specimens are essentially invisible outside of a tiny community of museum specialists. The only record of these specimens' existence is on labels enclosed in the jars with the preserved animals or in paper logbooks on a shelf. These specimens will remain nearly undiscoverable on museum shelves until their core descriptive information is made digitally available. Therefore, this project will create public digital records for over 7.5 million specimens from our nation's legacy of marine exploration, thereby making the immense

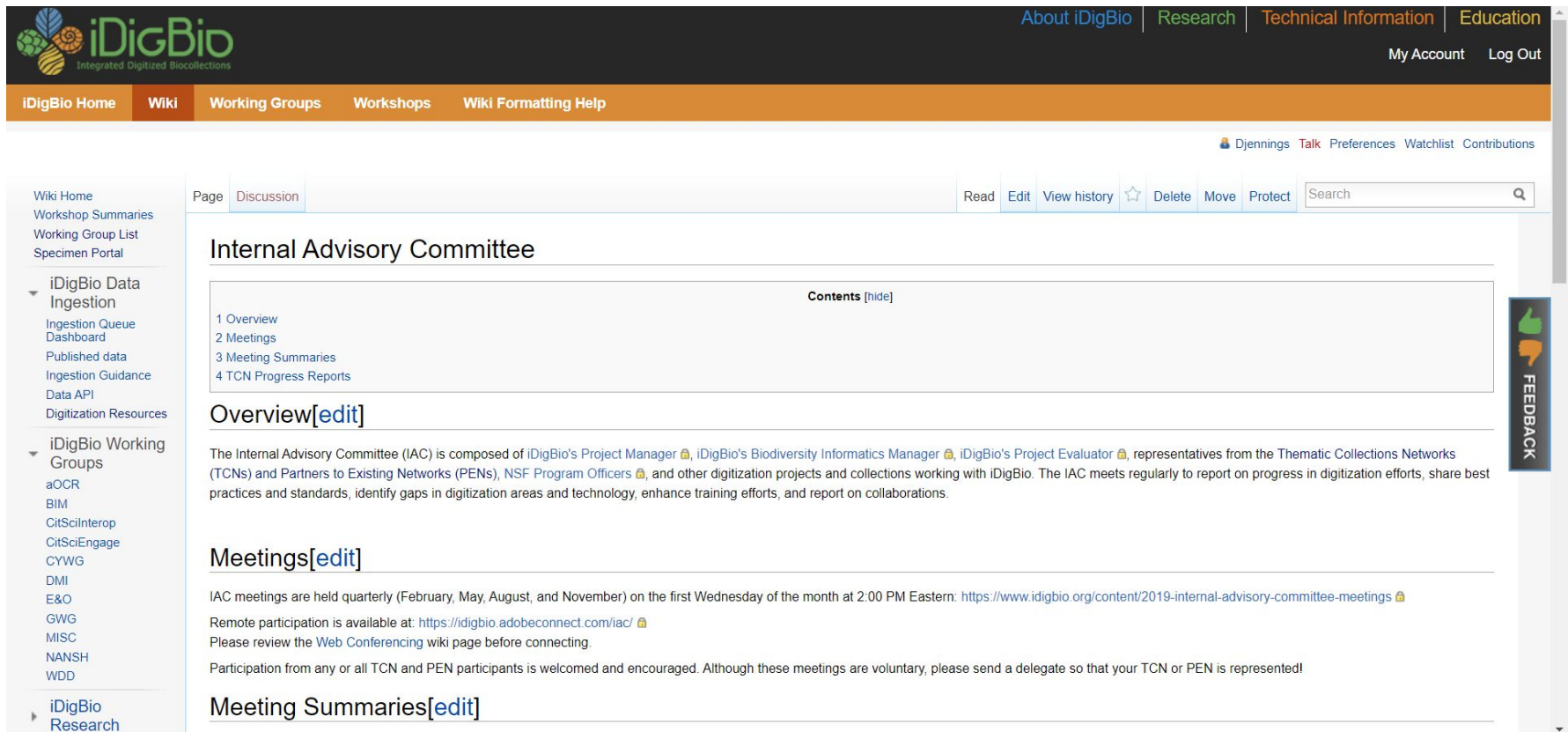
DigIn TCN
☰
Quick Links
Project Summary
Current Research
Project Websites
Publications





Quarterly Meeting Minutes & Reports

https://www.idigbio.org/wiki/index.php/Internal_Advisory_Committee



iDigBio Integrated Digitized Biocollections

About iDigBio | Research | Technical Information | Education

My Account | Log Out

iDigBio Home | Wiki | Working Groups | Workshops | Wiki Formatting Help

Djennings | Talk | Preferences | Watchlist | Contributions

Wiki Home | Workshop Summaries | Working Group List | Specimen Portal

iDigBio Data Ingestion

- Ingestion Queue Dashboard
- Published data
- Ingestion Guidance
- Data API
- Digitization Resources

iDigBio Working Groups

- aOCR
- BIM
- CitSciInterop
- CitSciEngage
- CYWG
- DMI
- E&O
- GWG
- MISC
- NANSH
- WDD

iDigBio Research

Page | Discussion

Read | Edit | View history | Delete | Move | Protect

Search

Internal Advisory Committee

Contents [hide]

- 1 Overview
- 2 Meetings
- 3 Meeting Summaries
- 4 TCN Progress Reports

Overview[edit]

The Internal Advisory Committee (IAC) is composed of iDigBio's Project Manager, iDigBio's Biodiversity Informatics Manager, iDigBio's Project Evaluator, representatives from the Thematic Collections Networks (TCNs) and Partners to Existing Networks (PENs), NSF Program Officers, and other digitization projects and collections working with iDigBio. The IAC meets regularly to report on progress in digitization efforts, share best practices and standards, identify gaps in digitization areas and technology, enhance training efforts, and report on collaborations.

Meetings[edit]

IAC meetings are held quarterly (February, May, August, and November) on the first Wednesday of the month at 2:00 PM Eastern: <https://www.idigbio.org/content/2019-internal-advisory-committee-meetings>

Remote participation is available at: <https://digbio.adobeconnect.com/iac/>

Please review the [Web Conferencing wiki](#) page before connecting.

Participation from any or all TCN and PEN participants is welcomed and encouraged. Although these meetings are voluntary, please send a delegate so that your TCN or PEN is represented!

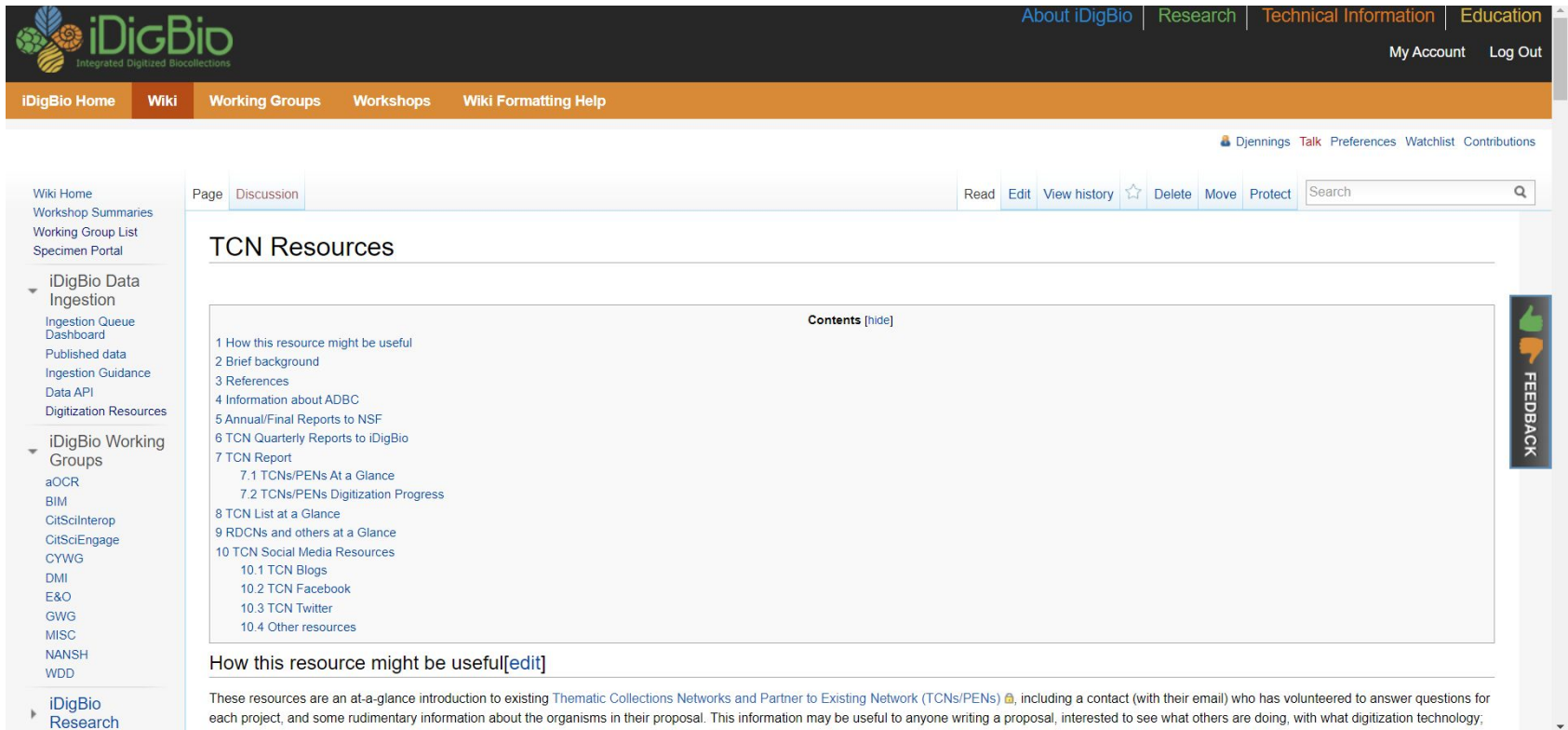
Meeting Summaries[edit]

FEEDBACK



TCN Resources

https://www.idigbio.org/wiki/index.php/TCN_Resources




The screenshot shows the iDigBio Wiki page for "TCN Resources". The page has a navigation bar at the top with links for "About iDigBio", "Research", "Technical Information", and "Education". Below this is a secondary navigation bar with "iDigBio Home", "Wiki", "Working Groups", "Workshops", and "Wiki Formatting Help". The main content area includes a search bar and a list of actions: "Read", "Edit", "View history", "Delete", "Move", and "Protect". The page title is "TCN Resources" and it features a "Contents" table of contents with 10 numbered items. A "Feedback" button is visible on the right side of the page.

TCN Resources

Contents [hide]

- 1 How this resource might be useful
- 2 Brief background
- 3 References
- 4 Information about ADBC
- 5 Annual/Final Reports to NSF
- 6 TCN Quarterly Reports to iDigBio
- 7 TCN Report
 - 7.1 TCNs/PENs At a Glance
 - 7.2 TCNs/PENs Digitization Progress
- 8 TCN List at a Glance
- 9 RDCNs and others at a Glance
- 10 TCN Social Media Resources
 - 10.1 TCN Blogs
 - 10.2 TCN Facebook
 - 10.3 TCN Twitter
 - 10.4 Other resources

How this resource might be useful[edit]

These resources are an at-a-glance introduction to existing Thematic Collections Networks and Partner to Existing Network (TCNs/PENs) , including a contact (with their email) who has volunteered to answer questions for each project, and some rudimentary information about the organisms in their proposal. This information may be useful to anyone writing a proposal, interested to see what others are doing, with what digitization technology,

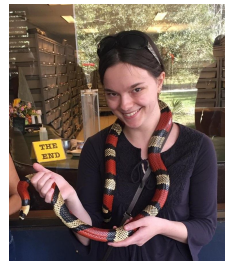


Other Helpful Resources

- Welcome to iDigBio:
[https://www.idigbio.org/wiki/index.php/Welcome to iDigBio](https://www.idigbio.org/wiki/index.php/Welcome_to_iDigBio)
- MediaWiki Reference Card:
<https://meta.wikimedia.org/wiki/File:MediaWikiRefCard.pdf>
- Workshop Planning and Deliverables:
[https://www.idigbio.org/wiki/index.php/Workshop Planning and Deliverables](https://www.idigbio.org/wiki/index.php/Workshop_Planning_and_Deliverables)
- Content Style Guide and Workflow:
[https://www.idigbio.org/wiki/index.php/Content Style Guide and Workflow](https://www.idigbio.org/wiki/index.php/Content_Style_Guide_and_Workflow)
- Adapting to COVID-19 Webinar Series → **Oct 27** topic is about virtual Project Management (including talks from fellow TCNs):
[https://www.idigbio.org/wiki/index.php/Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World](https://www.idigbio.org/wiki/index.php/Webinar_Series:_Adapting_to_COVID-19:_Resources_for_Natural_History_Collections_in_a_New_Virtual_World)



How To Get Your Data To iDigBio



Cat Chapman
Biodiversity Informatics Coordinator
cchapman@floridamuseum.ufl.edu



What's In This For You?

Meet the iDigBio Staff

Overview of the ingestion process

Learn how to get your data *published*



iDigBio Data Mobilization Staff

Caitlin “Cat” Chapman

cchapman@floridamuseum.ufl.edu



Biodiversity Informatics
Coordinator

Dan Stoner

dstoner@acis.ufl.edu



Data Integration Expert



data@idigbio.org



The go-to guide for data ingestion

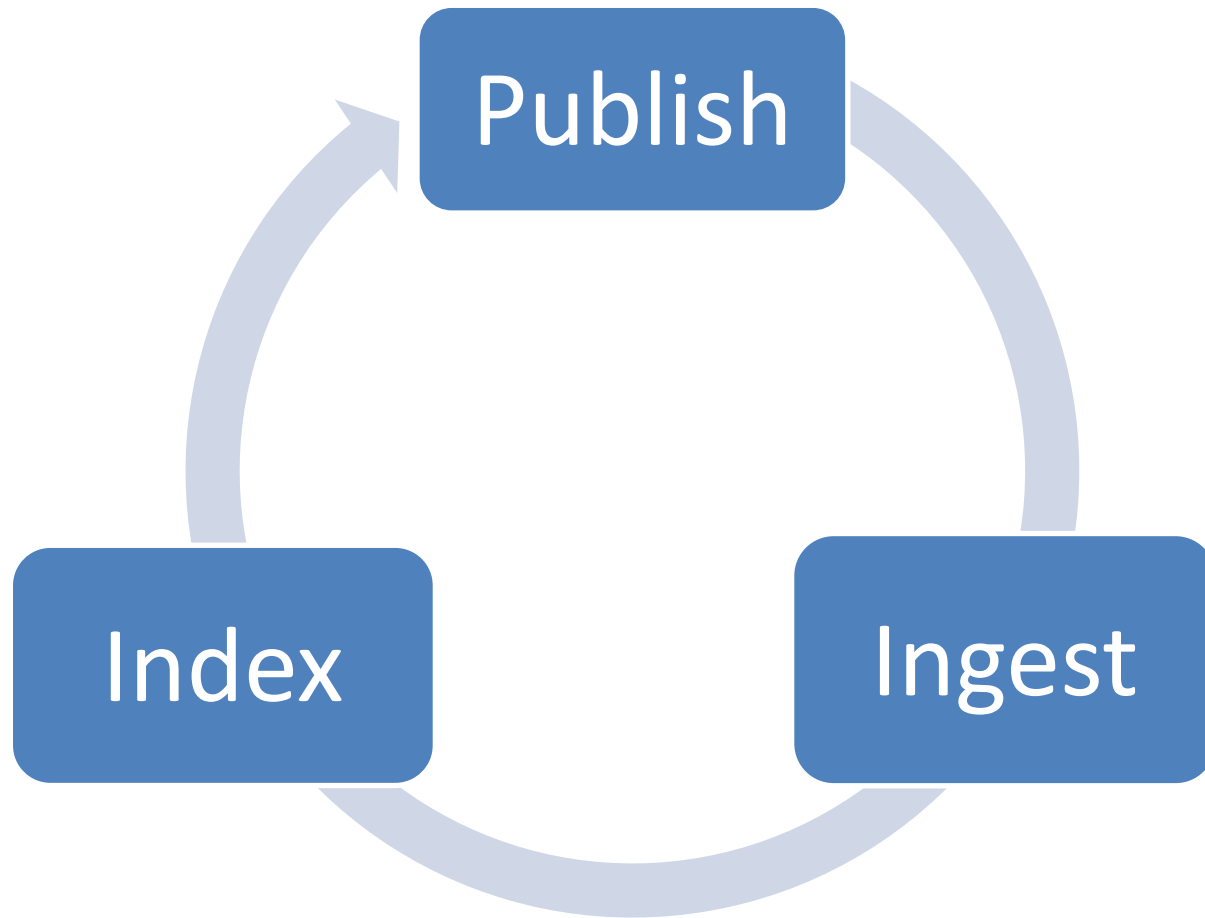
Everything you wanted to know about preparing data for ingestion:

https://www.idigbio.org/wiki/index.php/Data_Ingestion_Guidance

- Identifiers
- **Darwin Core** – occurrence data (specimen records)
- **Audubon Core** - media



Ingestion Process

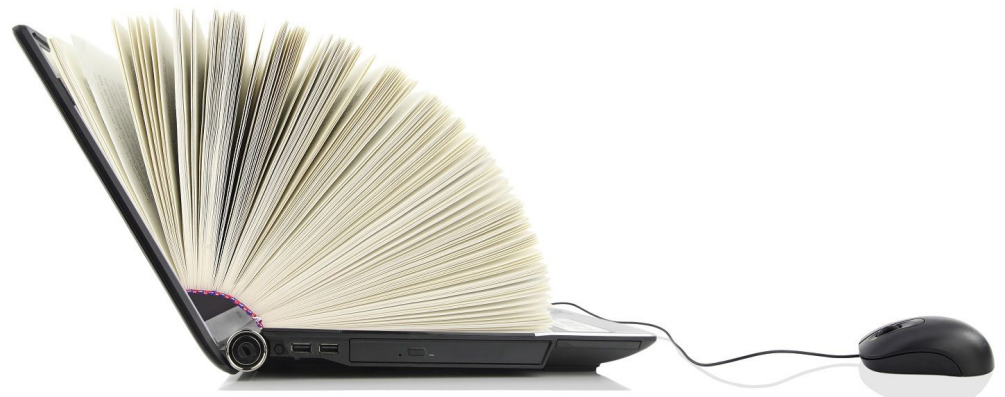




What do we mean by **publishing** data?

making biodiversity data publicly accessible & discoverable, in a standardized form, via a URL.

** that is reproducible and automated*

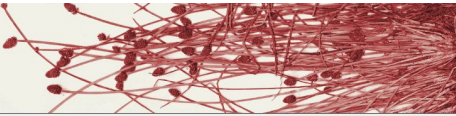




Data publishing – where to begin

- Email data@idigbio.org
“I’m ready”
- Review your data and publishing options together

Consortium of Midwest Herbaria



Home | Specimen Search | Images | Inventories | Interactive Tools | Crowdsourcing
Log In | New Account | Sitemap

Darwin Core Archive Publishing

The following downloads are occurrence data packages from collections that have chosen to publish their complete dataset as a Darwin Core Archive (DwC-A) file. A DwC-A file is a single compressed ZIP file that contains one to several data files along with a meta.xml document that describes the content. The archives below contain three comma separated (CSV) files containing occurrences, identifications (determinations), and image metadata. Fields within the occurrences.csv file are defined by the Darwin Core exchange standard. The identification and image files follow the DwC extensions for those data types.


Data Usage Policy:

Use of these datasets requires agreement with the terms and conditions in our Data Usage Policy. Locality details for rare, threatened, or sensitive records have been redacted from these data files. One must contact the collections directly to obtain access to sensitive locality data.

RSS Feed: <http://midwestherbaria.org/portal/webservices/dwc/rss.xml>

Consortium of Midwest Herbaria DwC-Archive Files

Code	Collection Name	DwC-Archive	Metadata	Pub Date
ALBC	Ashlon College	DwC-A (1.3M)	EML	2017-06-05
CALVIN	Calvin College	DwC-A (0.5M)	EML	2017-06-05
CMC	Central Michigan University	DwC-A (3M)	EML	2017-09-31
EMC	Eastern Michigan University Herbarium	DwC-A (2.6M)	EML	2017-06-05
GVSC	Grand Valley State University	DwC-A (0.6M)	EML	2017-06-05
HLSD	Hillsdale College Herbarium	DwC-A (0.9M)	EML	2017-06-05
HOPE	Hope College	DwC-A (0.9M)	EML	2017-06-05
HUNT	Huntington University Herbarium	DwC-A (0.4M)	EML	2017-06-06
ILLS	Illinois Natural History Survey	DwC-A (30.1M)	EML	2017-09-31
IND	Indiana University Herbarium (Deam Herbarium)	DwC-A (11M)	EML	2017-06-06
MIN	J. F. Bell Museum of Natural History Herbarium	DwC-A (14.1M)	EML	2017-09-31
MIU	Miami University Willard Sherman Turrell Herbarium	DwC-A (3.3M)	EML	2017-06-05
MOR	Morton Arboretum	DwC-A (14.4M)	EML	2017-06-06



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

..... **ENGLISH**

Home
About

Hosted resources available through this IPT

Filter:

Logo	Name	Organisation	Type	Subtype	Records	Last modified	Last publication	Next publication
	AMNH Invertebrate Paleontology Collection	AMNH	Occurrence	Specimen	8,982	2017-01-09	2017-01-09	--
	BMSM Bailey-Mathews National Shell Museum	BMSM	Occurrence	Specimen	122,166	2017-07-11	2017-07-11	--
	BPPC Black Hook Forest Consortium Herbarium	BPPC	Occurrence	Specimen	623	2016-08-29	2016-08-29	--
	CMC Cincinnati Museum Center Invertebrate Paleontology	CMC	Occurrence	Specimen	60,165	2016-11-12	2016-11-10	--
	DAV UC Davis Center for Plant Diversity	DAV	Occurrence	Specimen	129,178	2016-11-21	2016-11-21	--
	FSUCML Zoological Collections	FSUCML	Occurrence	Specimen	1,015	2017-07-20	2016-03-08	--
	LSU Shirley C. Tucker Herbarium at Louisiana State University - Algae	LSU LSUM	Occurrence	Specimen	59	2017-05-31	2017-05-31	--
	LSU Shirley C. Tucker Herbarium at Louisiana State University - Bryophytes	LSU LSUM	Occurrence	Specimen	5,199	2017-05-31	2017-05-31	--
	LSU Shirley C. Tucker Herbarium at Louisiana State University - Lichens	LSU LSUM	Occurrence	Specimen	31,190	2017-05-31	2017-05-31	--
	LSU Shirley C. Tucker Herbarium at Louisiana State University - Vascular Plants	LSU LSUM	Occurrence	Specimen	118,109	2017-05-31	2017-05-31	--
	LSU Bernard Lowy Mycological Herbarium at Louisiana State University - Fungi	LSU LSUM	Occurrence	Specimen	18,107	2017-05-31	2017-05-31	--

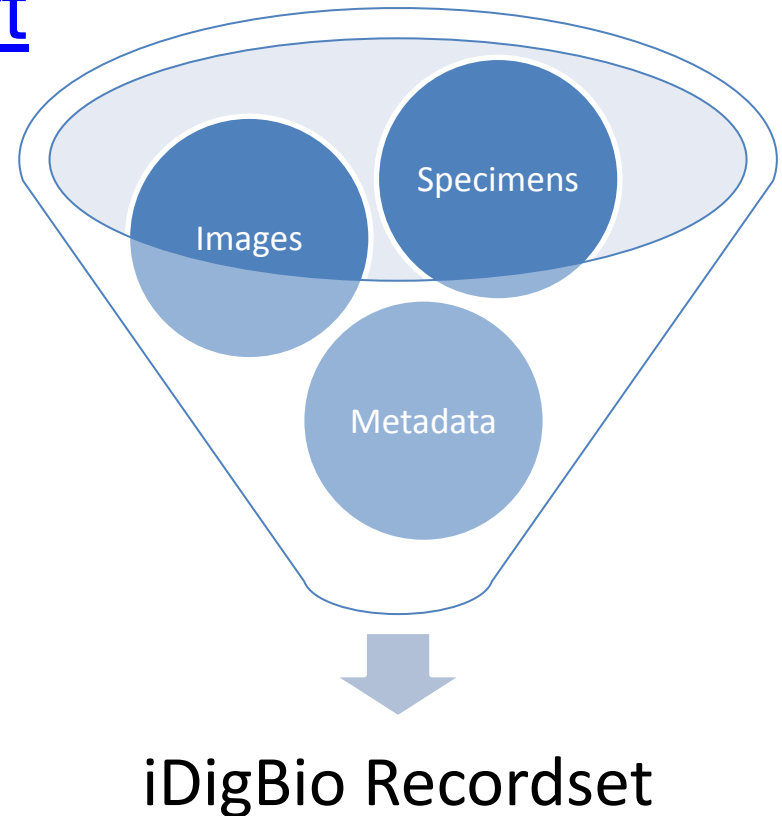


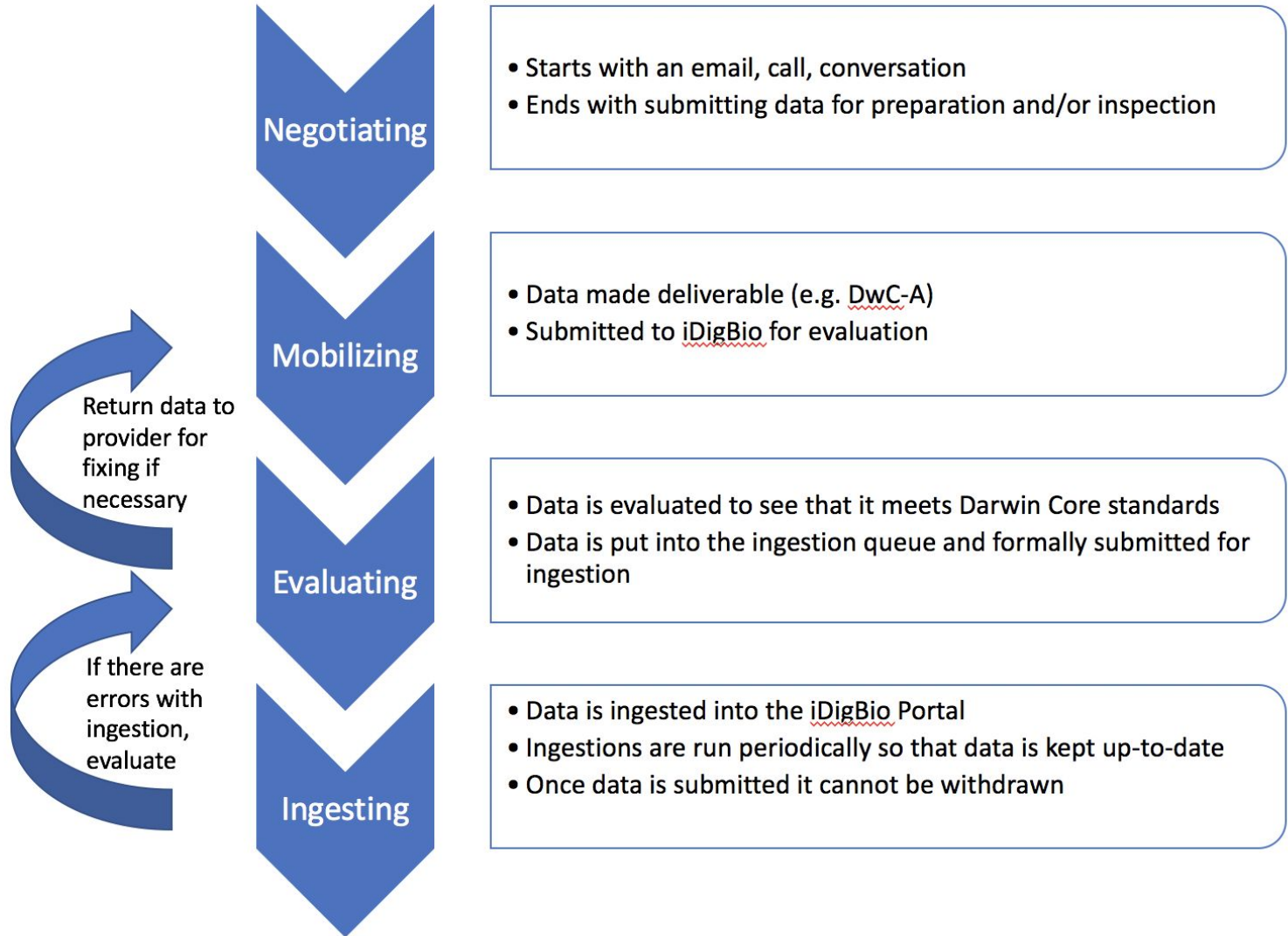
Ingestion Queue

- https://www.idigbio.org/wiki/index.php/Data_Ingestion_Report

Milestones:

- Negotiating
- Mobilizing
- Evaluating
- Ingesting







DATASET INFO: info about the provider (metadata)

Document your dataset **metadata** with your provider information:

- responsible parties (name, address, email, role)
- institution name, institution code, collection code, logo
- URL to the collection at your institution
- descriptive paragraph about the institution, collection, and the dataset



DATASET INFO: rights

- Use Creative Commons standards:

- CC0 for data (not copyrightable)



- CC BY for media (at least)





IDENTIFIERS

Every specimen and media record needs an identifier. [Robust and persistent]

We like UUIDs with a prefix:

urn:uuid:2d5d3a8f-7a18-4825-a129-4a32b4ae58b8



Remember, when you're ready:

data@idigbio.org



Contact us!



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Thank you! Questions?



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vimeo.com/idigbio



idigbio.org/rss-feed.xml



<webcal://www.idigbio.org/events-calendar/export.ics>



VIRTUAL ADBC SUMMIT 2020

Break-out Session 2:10 - 2:55

Break 2:55 - 3:10

Break-out Follow-up Discussion 3:10 - 3:50

Meet and Greet for New TCNs and PENs 3:50 - 4:30