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: 10\textsuperscript{th} 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

The largest source of information on biological diversity (outside nature)
Context: Biodiversity Collections

Until now: Data in collections have been inaccessible to most potential users.
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*).
- **Digitizing Fossils to Enable New Syntheses in Biogeography-Creating a PALEONICHES-TCN** (*University of Kansas*).
- **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 Voucher 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 Digitizing Small Fungi with Large Impacts on the Function and Health of Ecosystems (*INHS, University of Illinois*).
- **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**: 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*).
- **American Crossroads**: Digitizing the Vascular Flora of the South-Central United States (*Botanical Research Institute of Texas*).
- **Digitizing the Vascular Flora of the South-Central United States**: 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**: Digitizing the Vascular Flora of the South-Central United States (*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

- Repeat Participants
- Unique (non-repeat) Participants

12,744 Total Participants
The iDigBio Portal has 127M records for ~381M specimens with 40M associated media records.

iDigBio is working with 926 collections in 317 institutions funded by the ADBC program.
Flexible search across all data, indexed fields, media, geolocation, map boundary, auto-completion, synonyms, and a robust API

https://www.idigbio.org/portal
View search results as list, labels, or media
Publications Citing Portal Data Use

Status of the National Biodiversity Collections Digitization Effort

Cumulative Number of Publications

- Publications that mention the national digitization effort
- Publications that use data via portals
Publications by ADBC Authors

Publications Related to the National Digitization Effort by Source

Cumulative Number of Publications

- Other authors
- Publications by ADBC-supported authors
Collections Data in Action: Beyond acronyms

Erica Krimmel
iDigBio Digitization Resource Coordinator
ekrimmel@fsu.edu

Digitization

Collection Management Software

- Arctos
- Symbiota
- Specify
- Axiell EMu
- CollectionSpace

Data Mobilization

- Biodiversity Information Standards
- DwC - Darwin Core
- IPT - Integrated Publishing Toolkit
- OpenRefine
- GEOLocate
- DAMS – Digital Asset Management
- ABBYY, Tesseract
- *Global unique identifiers*
  - GUID, UUID, ARK, IGSN

Community Building

- SPNHC
- GRBio to GBIF
- Darwin Core Hour
- Small Collections Network
- Entomological Collections Network
- Working Groups:
  - DROID, GWG, SWG, PaleoDigi, EODI, …
Data Aggregation
Facilitating Research Access and Use

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

- 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
iDigBio Resources

Jillian Goodwin
Conference Manager
jgoodwin@floridamuseum.ufl.edu

Molly Phillips
Education, Outreach, Diversity, & Inclusion Coordinator
mphillips@flmnh.ufl.edu
https://www.idigbio.org
https://www.idigbio.org/about-idigbio

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

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
Documenting Marine Biodiversity through Digitization of Invertebrate Collections (DigIn)

1. 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 seafloors 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 breadth and evolutionary scope of these collections is in the marine invertebrates, animals without backbone - sea stars, crabs, 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 very narrow community of museum specialists. The only record of these specimens’ existence is on labels encased in the jars with the preserved animals or in paper logsbooks 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 ocean’s enigmatic 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 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, 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]
## Upcoming Events

Want to learn more about adding this calendar to your device? [Click here](https://www.idigbio.org/outreach-events-sidebar).

**Filter by Event Type**

- iDigBio Events (Not meetings)

<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
<th>Event Date</th>
<th>Event Type</th>
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<tbody>
<tr>
<td>Webinar Series: Adapting to COVID-19: Resources for Natural History Collections in a New Virtual World</td>
<td>Zoom - See event above for room information.</td>
<td>09-15-2020</td>
<td>iDigBio Webinar</td>
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<td>09-22-2020 to 09-25-2020</td>
<td>iDigBio Workshop</td>
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<td>2020 ADBC Summit</td>
<td>Zoom</td>
<td>09-22-2020 to 09-25-2020</td>
<td>iDigBio Workshop</td>
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<td>Open Office Hours hosted by the API User Group (R-based)</td>
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<td>09-23-2020</td>
<td>iDigBio Webinar</td>
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<td>Finding Field Station Data for Research Use: A virtual mini-workshop</td>
<td></td>
<td>09-29-2020</td>
<td>iDigBio Webinar, iDigBio Workshop, iDigBio Webinar, iDigBio Workshop</td>
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<td>Education, Outreach, Diversity and Inclusion Open Office Hours</td>
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<td>2020 Internal Advisory Committee Meetings</td>
<td>UF Building 105, Room 310 (Gainesville, FL)</td>
<td>11-04-2020</td>
<td>iDigBio Webinar</td>
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*Note: Event dates and locations are approximate and subject to change.*
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
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

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@fsmnh.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 a supportive and professional environment.
Research

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

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

https://www.idigbio.org/technical-info
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

1. iDigBio Introduction
2. Recommendations for the Acquisition, Processing, and Archiving of Digital Media
3. Interest/Working Groups
4. Digitization Resources and Workflows
5. iDigBio Workshops, Reports, and Wikis
6. Videos - Digitization Resources and Workflows
7. iDigBio Introduction

More than 1.600 natural history collections across the United States house over 1 trillion 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

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

Interest/Working Groups

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
- iDigBio and NABIOS Working Group (North American Network of Small Herbaria)
- Field-preserved Arthropod and Microscopic Slide Imaging Interest Group
- Palaeontology Digitization Working Group
- Small Collections Network Working Group
- Vertebrate Digitization Interest Group
- Field Station Interest Group

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

https://www.idigbio.org/education
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.
Citizen Scientist

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) suite 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 260 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 as 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—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 SynBiohub, the Australia-based DigVit, the UK-based Herbaria@Home, and the France-based...
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

Use the search boxes!
Webinar: Towards user-definable, semi-automated workflows for 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
Jun 10, 2012 ... Efficient and effective workflows are at the heart of successful biological and palaeontological collections digitization. Much work has been done...

Workflow Modules and Task Lists | iDigBio
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
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
This session at GSA 2015 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
Developing Robust Object to Image to Data (DROID) Workflows Workshop. Building 105,
Flexible search across all data, indexed fields, media, and geolocations

https://www.idigbio.org/portal
Get Involved!

Alnycea 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

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

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
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
Step 8: Collaborate!

**iDigBio Collaborations Enabling Research**

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

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 plugin can be found at https://github.com/iDigBio/geojson.
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.
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
Quarterly Meeting Minutes & Reports

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

Internal Advisory Committee

Overview[edit]

The Internal Advisory Committee (IAC) is composed of iDigBio's Project Manager & Biodiversity Informatics Manager & Project Evaluator & representatives from the Thematic Collections Networks (TCNs) and Partners to Existing Networks (PENs), NSF Program Officers & 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://idigbio.adobeconnect.com/iac/ & Please review the Web Conferencing wiki page before connecting.

Meeting Summaries[edit]
TCN Resources

https://www.idigbio.org/wiki/index.php/TCN_Resources
Other Helpful Resources

• Welcome to iDigBio: https://www.idigbio.org/wiki/index.php/Welcome_to_iDigBio
• Workshop Planning and Deliverables: https://www.idigbio.org/wiki/index.php/Workshop_Planning_and_Deliverables
• 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
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:


- 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
Ingestion Queue


Milestones:

- Negotiating
- Mobilizing
- Evaluating
- Ingesting

iDigBio Recordset
### Negotiating
- Starts with an email, call, conversation
- Ends with submitting data for preparation and/or inspection

### Mobilizing
- Data made deliverable (e.g. DwC-A)
- Submitted to iDigBio for evaluation

### Evaluating
- Data is evaluated to see that it meets Darwin Core standards
- Data is put into the ingestion queue and formally submitted for ingestion

### Ingesting
- Data is ingested into the iDigBio Portal
- Ingestions are run periodically so that data is kept up-to-date
- Once data is submitted it cannot be withdrawn

Return data to provider for fixing if necessary

If there are errors with ingestion, evaluate
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?

facebook.com/iDigBio
twitter.com/iDigBio
vimeo.com/idigbio
idigbio.org/rss-feed.xml
webcal://www.idigbio.org/events-calendar/export.ics

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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