



Exploring the Who What Where

Quick overview of some acronyms, projects, software, etc. affiliated with natural history collections data use and digitization initiatives



Orientation Session, ADBC Summit VI
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Tuesday 1 November 2016

An acronym rich environment (ARE)



A framework for this walk-through

- ADBC, TCNs and PENs
- Digitization related acronyms
- Aggregators and beyond
- And just a few more...

- Glossary in program
- Full glossary on the Wiki

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

From NIBA to the ADBC & BCoN

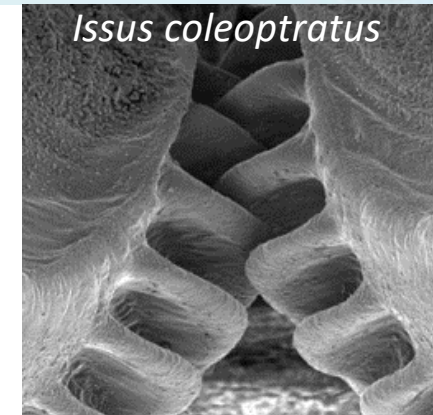
- Networked Integrated Biocollections Alliance (NIBA)
- Resulted in Advancing the Digitization of Biological Collections (ADBC)
- Biodiversity Collections Network (BCoN)
 - AIBS (American Institute for Biological Sciences), iDigBio & NSC Alliance (Natural Science Collections Alliance)



<http://bcon.aibs.org/>

Advancing the Digitization of Biological Collections (ADBC)

- iDigBio, that's Integrated Digitized Biocollections
 - Funded by National Science Foundation (NSF) to develop an integrated national infrastructure and resource for digitization of existing biodiversity collections in the U.S. iDigBio
- Thematic Collection Networks (TCNs)
 - A network of collaborative institutions
 - Digitize around a particular research theme.
 - Charged with defining and delineating subprojects for technology development or content generation; identifying deliverable goals, metrics for assessment, and specific needs for community support; providing technical support; and strengthening communications and outreach to other collections
- Partners to Existing Networks (PENs)
 - Must increase the number of specimens digitized in the ongoing project and fill gaps not addressed by the specimens in the existing TCN.



Credit: Malcolm Burrows

iDigBio – the Home Uniting Biocollections (HUB)

- Sustainability, digitization, facilitating research and educational use of collections data, cyberinfrastructure, ...
- Advanced Computing and Information Science (ACIS)
 - Implementing the cyberinfrastructure for iDigBio
- Libraries of Life (a free app)
 - Collections coming to life in 3-D, classroom applications, collaboration with TCNs, ASU (Arizona State University)
- WeDigBio (Worldwide Engagement for Digitized Collections)
 - Planet-wide collaborative 4-day event to engage the public, including students, to transcribe collections data and meet scientists
- The FOSSIL Project
 - Engaging amateur fossil clubs and societies as downstream users of digitized data

Thematic Collections Networks (TCNs) and Partners to Existing Networks (PENs)

Cretaceous World	
Fossil Insect Collaborative	1
Fossil Marine Invertebrates (EPICC)	
Great Lakes Invasives	
InvertEBase	1
InvertNet	1
LepNet	
Lichens & Bryophytes	4
Macroalgal Consortium	
Macrofungi Consortium	2
Microfungi Consortium	
Mid-Atlantic Megalopolis (MAM)	
NEVP	2
PALEONICHES	2
SCAN	4
SERNEC	
Tri-Trophic	
Vouchered Animal Communication Signals	

TCN: network of institutions strategically digitizing information for a particular research theme, such as impacts of climate change or biota of a region.

The Cretaceous World

Invert · E · Base

LBOC

MYCOLOGY COLLECTIONS PORTAL

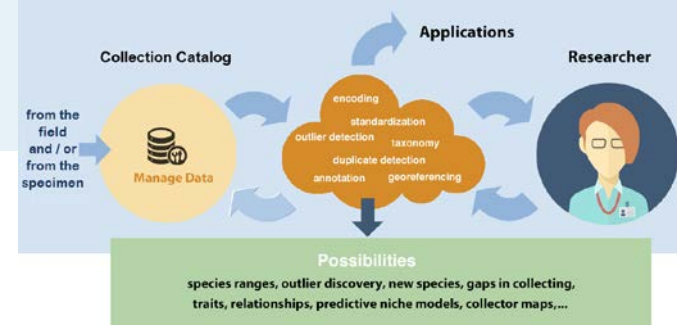
The Mid-Atlantic Megalopolis

Mobilizing New England Vascular Plant Specimen Data to Track Environmental Changes

Digital Atlas of Ancient Life

SCAN
Symbiota Collections of Arthropods Network

Digitization



Collection Management Software

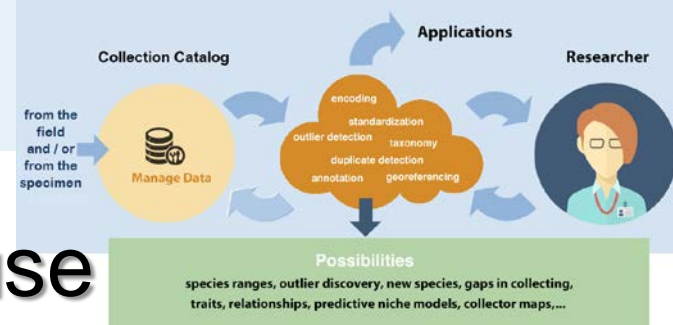
- Arctos
- Symbiota
- Specify
- Axiell EMu
- collectionspace

Community Building

- SPNHC
- GRBio
- SCNet
- ECN
- Working Groups: DROID, GWG etc.

Data Mobilization

- TDWG – Biodiversity Information Standards (tdwg)
- DwC - Darwin Core
- AC - Audubon Core
- IPT – Integrated Publishing Toolkit (from GBIF)
- Kurator and Akka
- GEOLocate
- DAMS – Digital Asset Management
- ABBYY
- Unique identifiers - GUID, UUID, ARK, IGSN



Data aggregation and Data use

Biodiversity Data Mobilization and Use

- **EoL** - Encyclopedia of Life
- **BHL** – Biodiversity Heritage Library
- **NEON** – National Ecological Observatory Network
- **CyVerse** (iPlant) - facilitating scientific research in the cloud
- **GBIF** – Global Biodiversity Information Facility
- **iDigBio**
- **VertNet** – Vertebrate data portal, Data mobilization and cleaning services
- **BISON** – Biodiversity Serving our Nation – GBIF North American Node
- **USVH** – United States Virtual Herbarium
- **ALA, DigiVol** – Atlas of Living Australia
- **Canadensys** - unlocking specimen information held by Canadian university-based biological collections
- **SiBBR** – Brazilian Biodiversity Information System or Sistema de Informação sobre a Biodiversidade Brasileira)
- **CONABIO** (Mexico)
- **CRIA** (Brazil) and **SpeciesLink**

Education, Outreach, Inreach

- AIM-UP!
 - Advancing Integration of Museums into Undergraduate Programs; exploring the use of collections data 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
- Data Carpentry & Software Carpentry (DC and SwC)
 - **Biodiversity informatics skills** for graduate students and researchers. Focus on tidy data, fit for reproducible research. DC – novices, SwC for self-taught programmers in the sciences.

Publishing

- Pensoft
 - ARPHA Writing Tool (AWT): Authoring, Reviewing, Publishing, Hosting and Archiving
- 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, collaborate in private or open groups, and securely access your research from everywhere.
- 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 datatypes
- Figshare
 - online digital repository where researchers can preserve and share their research outputs, including figures, datasets, images, and videos. Open data



Got more?

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



[idigbio.org/wiki](https://www.idigbio.org/wiki)



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Integrated Digitized Biocollections

