iDigBio

Integrated Digitized Biocollections

iDigBio is funded by a grant from the National Science Foundation's Advancing Digitization of Biodiversity Collections Program (Cooperative Agreement EF-1115210). 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. All images used with permission or are free from copyright.

Introduction to iDigBio

12 June 2015
American Society of Mammalogists
Jacksonville, FL

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Estimates suggest that there are between 500 million and one billion biological and paleobiological specimens in the United States, perhaps 3+ billion worldwide. No one really knows for sure!

In an effort to make these collections universally accessible to taxonomists, ecologists, researchers, and the general public, in 2011 the U.S. National Science Foundation launched a $100 million, 10-year Advancing Digitization of Biodiversity Collections program and named the University of Florida and Florida State University jointly as the coordinating center and national resource for digitization.

The scope of our work is limited to public, non-federal, U.S. collections, though NSF has encouraged us to develop international collaborations.

Advancing Digitization of Biodiversity Collections

Integrated Digitized Biocollections (iDigBio)
University of Florida
Florida State University
Florida Museum of Natural History

The goal is to digitize and make available via the Web records for
all biological and paleontological collection objects in N. America
over the 10-year life of the project.

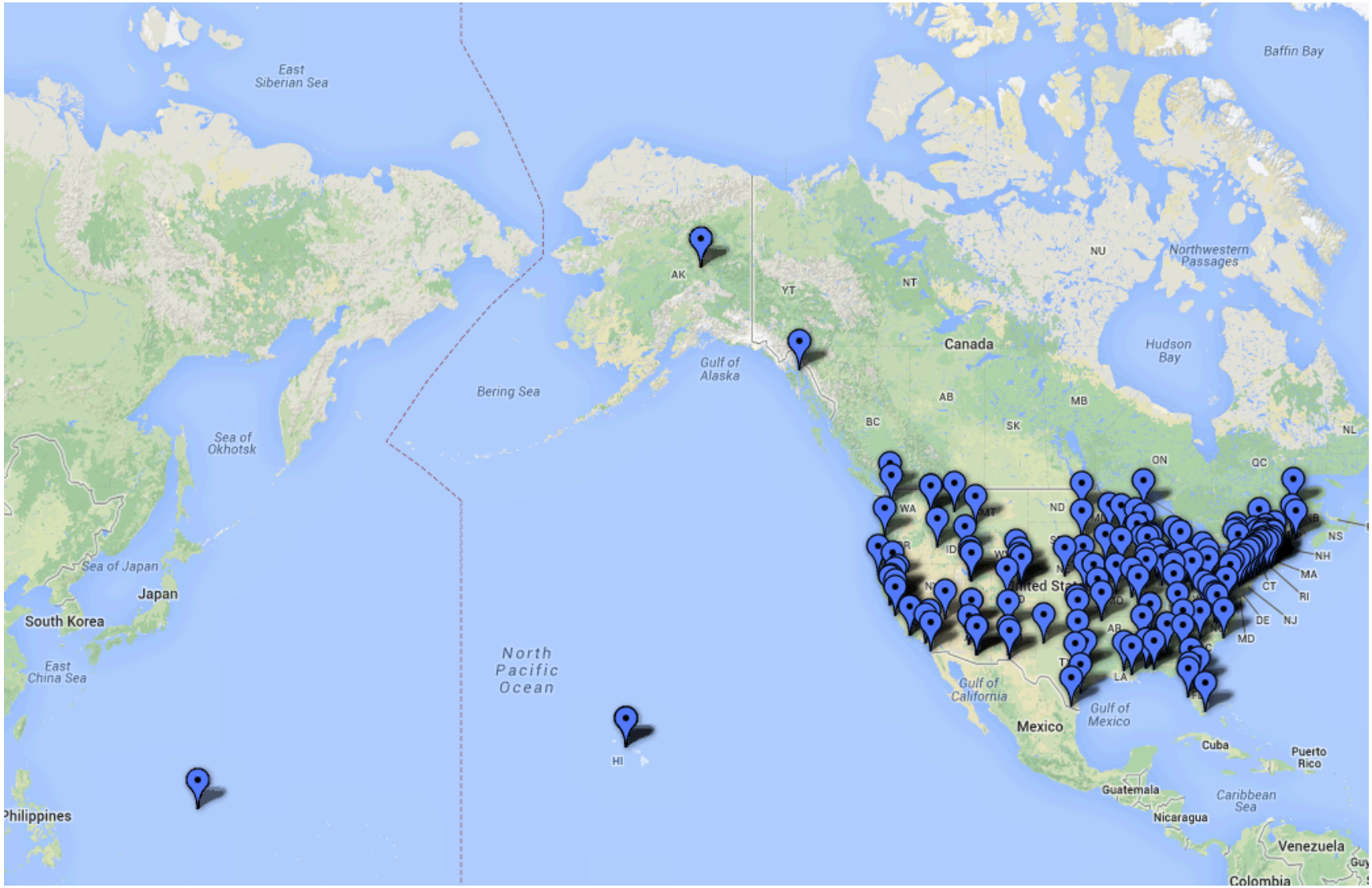
Mandate and Responsibility

- Provide/facilitate portal access to collections data
  - Make information available and discoverable
  - Label Data and images
- Enable digitization and research
  - Facilitate digitization workflows
  - Oversee implementation of standards and best practices for digitization
  - Allow for data discovery across organismal groups
- Be a client of digitization projects/networks
  - Actively seek partners and data sources
  - Respond to cyberinfrastructure needs
- Engage communities
  - Collections
  - Research
  - Citizen science and education
- Support ADBC goals
  - Access to information
  - Support for collections
  - Sustainability

Thirteen Thematic Collections Networks (TCNs) plus 10 Partner to Existing Networks (PENs)

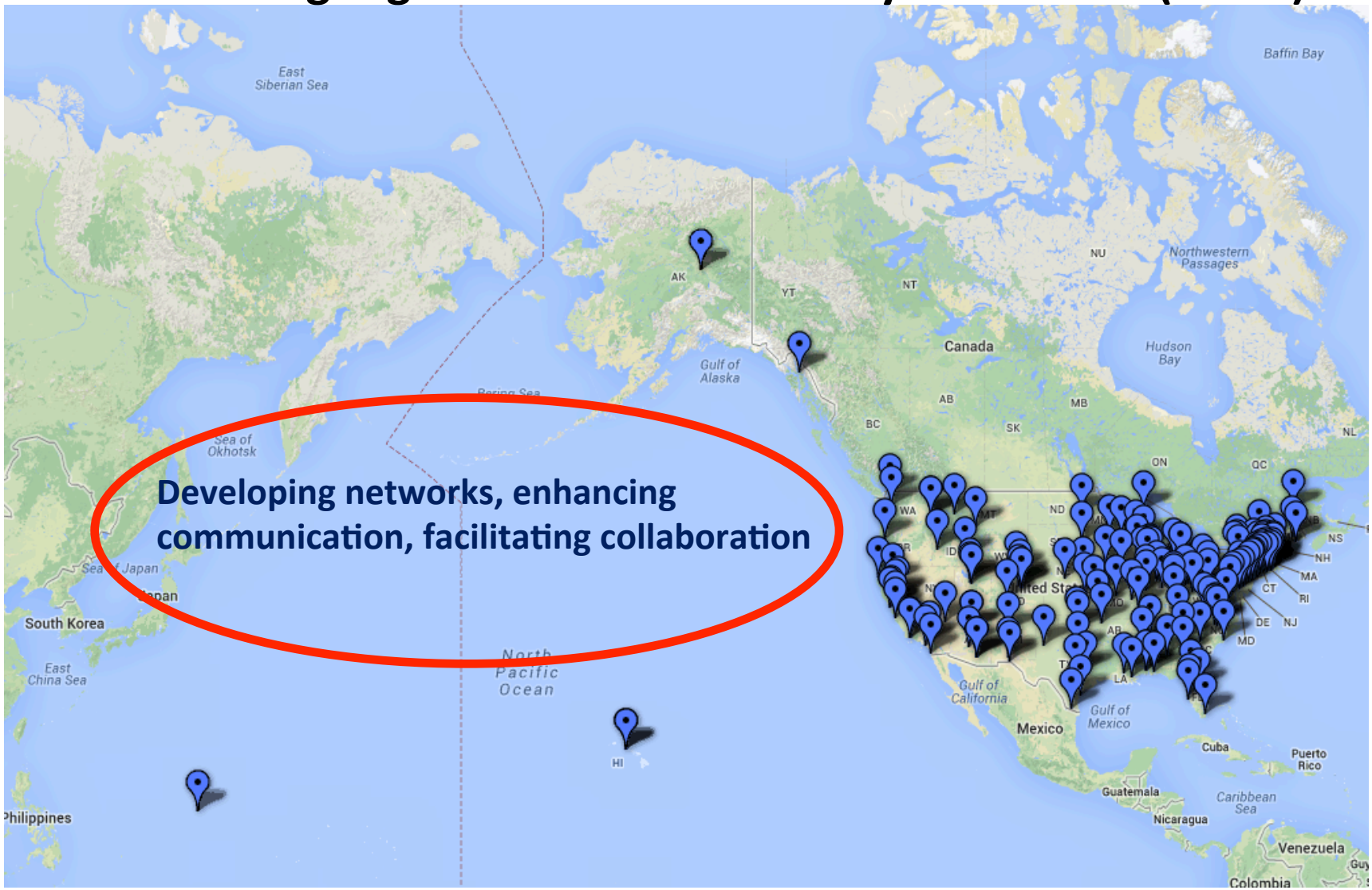
- InvertNet: An Integrative Platform for Research on Environmental Change, Species Discovery and Identification (*Illinois Natural History Survey, University of Illinois*) http://invertnet.org
- Plants, Herbivores, and Parasitoids: A Model System for the Study of Tri-Trophic Associations (*American Museum of Natural History*) http://tcn.amnh.org
- North American Lichens and Bryophytes: Sensitive Indicators of Environmental Quality and Change (*University of Wisconsin – Madison*) http://symbiota.org/nalichens/index.php http://symbiota.org/bryophytes/index.php (plus 2 PENs)
- 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 Anthropods Network (SCAN): A Model for Collections Digitization to Promote Taxonomic and Ecological Research (*Northern Arizona University*) http://hasbrouck.asu.edu/symbiota/portal/index.php
- iDigPaleo: Fossil Insect Collaborative: A Deep-Time Approach to Studying Diversification and Response to Environmental Change
- Developing a Centralized Digital Archive of Vouchered Animal Communication Signals (*Cornell University, Laboratory of Orthithology)*
- The Macroalgal Herbarium Consortium: Accessing 150 Years of Specimen Data to Understand Changes in the Marine/Aquatic Environment
- Collaborative: Documenting the Occurrence through Space & Time of Aquatic Non-indigenous Fish, Mollusks, Algae, & Plants Threatening North America's Great Lakes
- Collaborative Research: The Key to the Cabinets: Building and Sustaining a Research Database for a Global Biodiversity Hotspot
- InvertEBase: reaching back to see the future: species-rich invertebrate faunas document causes and consequences of biodiversity shifts

National Resource (iDigBio), Thematic Collection Networks (TCNs)



To date: 13 TCNs, 268 institutions, 438 collections, 50 states

Advancing Digitization of Biodiversity Collections (ADBC)



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Key Features of iDigBio

- Ingest **all contributed data** with emphasis on use of **GUIDs**, no restrictions
- Maintain **persistent datasets** and versioning, allowing new and edited records to be uploaded as needed while preserving existing records
- Ingest **textual** specimen records, plus associated still **images, video, audio, and other media** (or links to these resources as determined by the provider)
- Ingest linked documents and **associated literature**, including field notes, ledgers, monographs, related specimen collections, etc.
- Provide **virtual annotation** capabilities and track annotations back to the originating collection (collaborating with FilteredPush)
- Facilitate sharing and integration of data relevant to biodiversity research
- Provide computational services for biodiversity research

Information Dissemination

In March 2012, the iDigBio Steering Committee established a series of preparation-specific digitization training workshops focused on helping collections managers get started with and/or enhance local digitization programs, all to be held at host institutions.

- DROID (Developing Robust Object->Image->Data, May 2012)
- Herbarium digitization (Valdosta State, September 2012)
- Fluid-preserved collections digitization (U. Kansas, March 2013)
- Dried insect collections digitization (Field Museum, April 2013)
- Collections Digitization (West Virginia, ASB, April 2013)
- Imaging fluid-preserved invertebrates (U. Michigan, September 2013)
- Georeferencing Train-the-Trainers (iDigBio, Gainesville, August 2103)
- Paleontology digitization (Yale Peabody Museum, September 2013)
- Small Herbarium Digitization (Florida State University, December 2013)
- Digitization in the South Pacific (Honolulu, March 2014)
- Paleoimaging (Austin, TX, April 2014)
- Small Herbarium Digitization (Boise, Botany 2014, July 2014)
- Leveraging Digitization Knowledge Across Multiple Domains (Santa Barbara, October 2014)
- CT Scanning and Visualization Short Course (University of Texas, February 2015)

Product-oriented Workshops

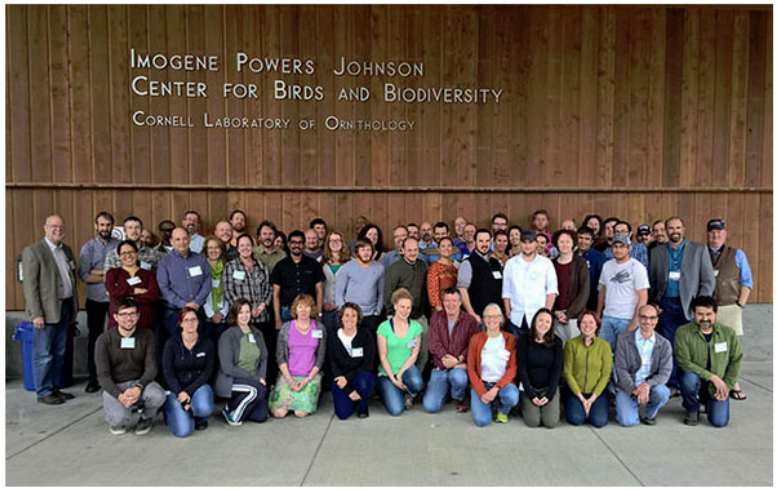
- Augmenting OCR Hackathon (Ft. Worth, February 2103)
- Original Source Materials Digitization (Yale Peabody Museum, March 2014)
- Recruiting and Retaining Small Collections in Digitization (Mt. Pleasant, MI, April 2014)
- CitScribe Hackathon (iDigBio, Gainesville, December 2013)
- Education and Outreach (iDigBio, Gainesville, January 2014)

Strategies for Vertebrate Digitization Workshop

- Developing a recommendation to NSF for inclusion of specimen management plans (similar to data management plans) within proposals, these plans potentially to include the data and specimen types to be generated by a proposal that will need permanent curation, an accounting of the specimens and data to be passed along to other more specialized collections, and a plan for making these data searchable and available.

As with all iDigBio workshops, the agendas, recordings of the workshop presentations, and PDF copies of the presentations are available on the workshop wiki.

If you are interested in being a part of a Vertebrate Digitization Working Group email Gil Nelson (gnelson@fsu.edu) or Molly Phillips (mphillips@flmnh.ufl.edu).



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Wikis
Working groups
Listservs

Vertebrate Collections, Data, and Digitization Working Group

Webinar Series

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