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.

IDIGBIO: THE U.S.NATIONAL SCIENCE FOUNDATION'S NATIONAL RESOURCE FOR THE DIGITIZATION OF BIOLOGICAL AND PALEOBIOLOGICAL COLLECTIONS

Geological Society of America
Annual Meeting
Vancouver, Canada
22 October 2014

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iDigBio/Florida State University

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Estimates suggest that there may be 1 billion biological and paleobiological specimens in the United States, 2+ 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 national resource for digitization.

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

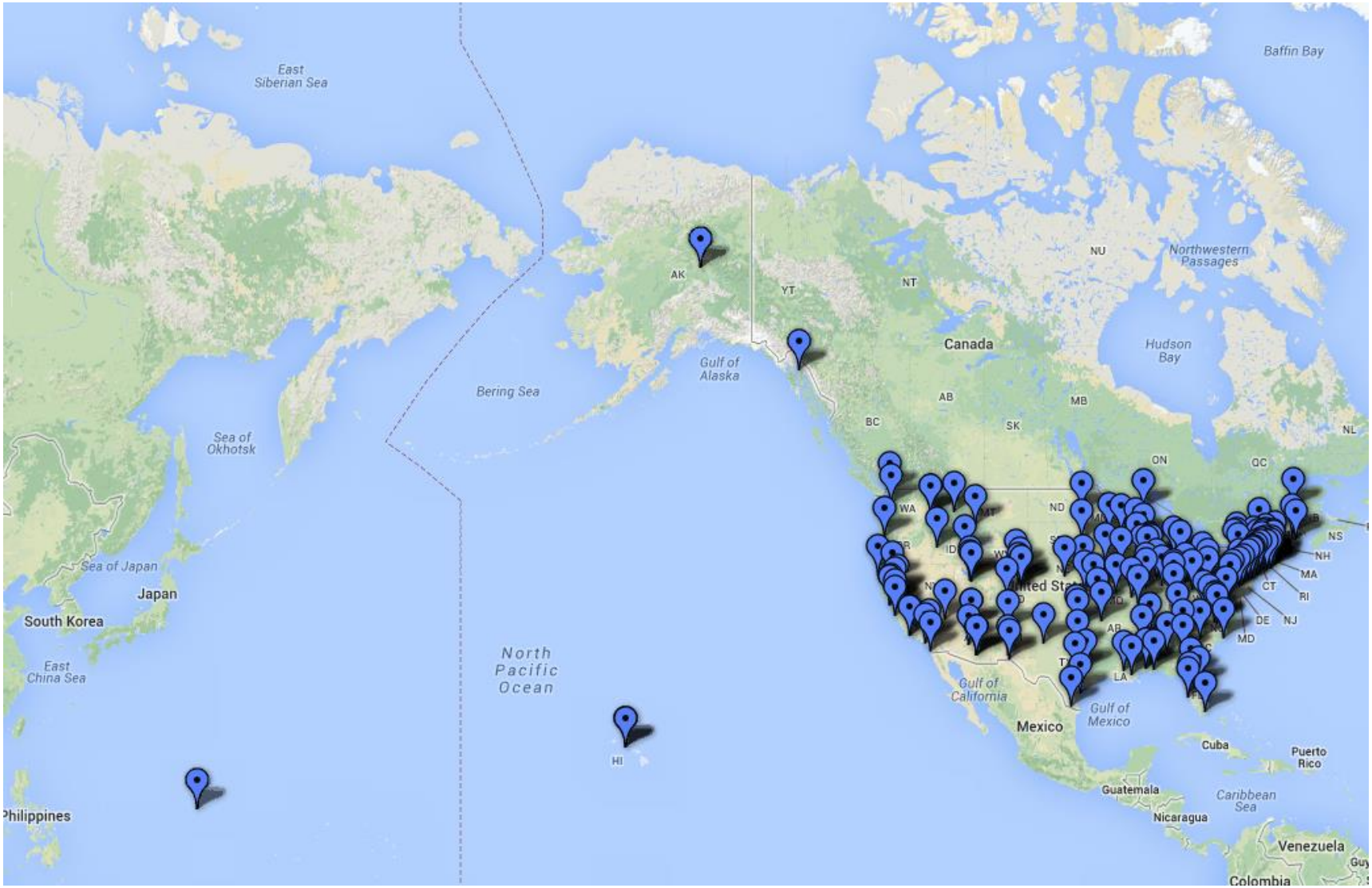
Mandate and Responsibility

- **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)

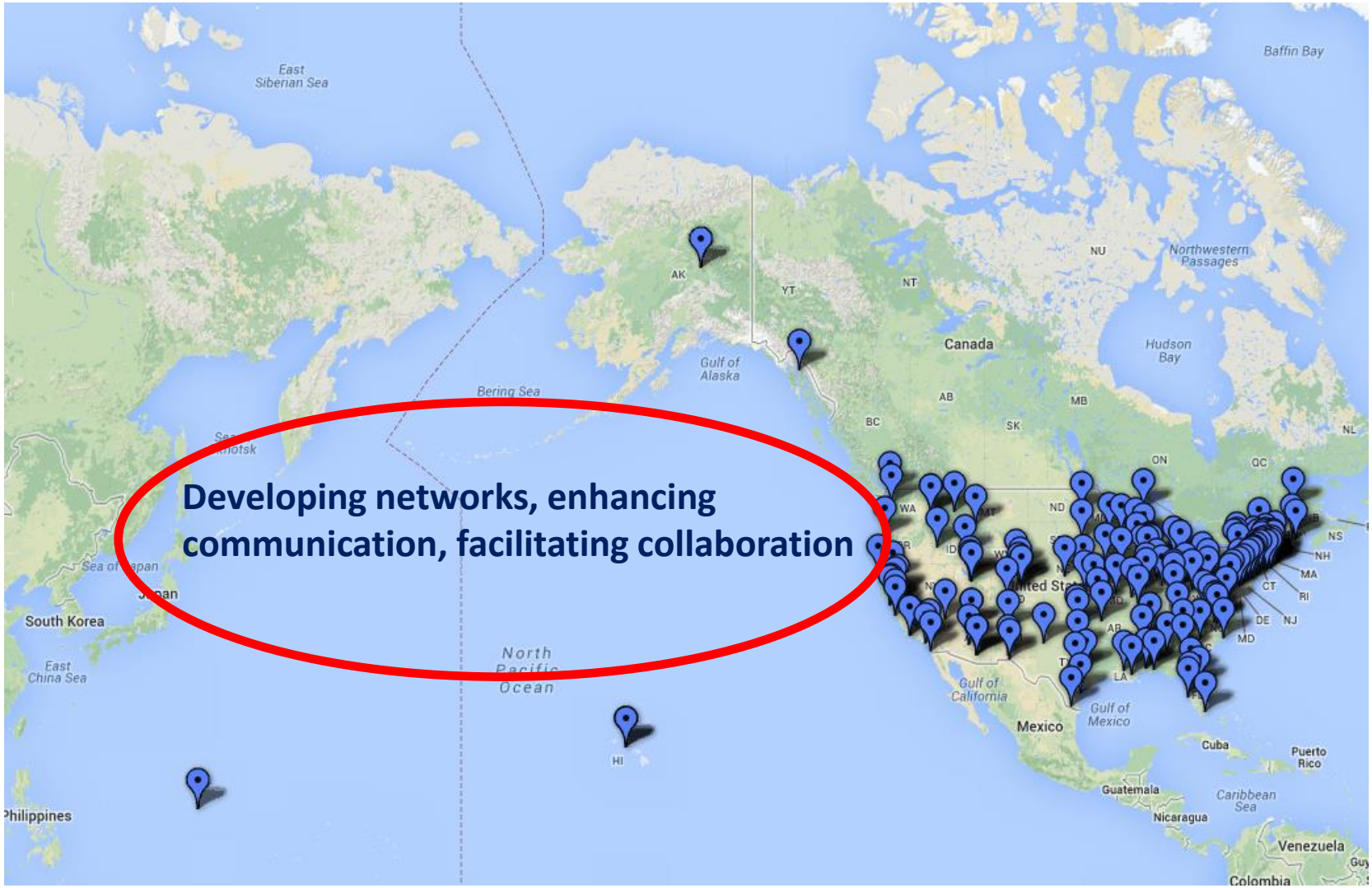
- InvertNet: An Integrative Platform for Research on Environmental Change, Species Discovery and Identification (*Illinois Natural History Survey, University of Illinois*) http://invertnet.org
- Plants, Herbivores, and Parasitoids: A Model System for the Study of Tri-Trophic Associations (*American Museum 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
- 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, 10 PENS, 203 unique institutions, 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

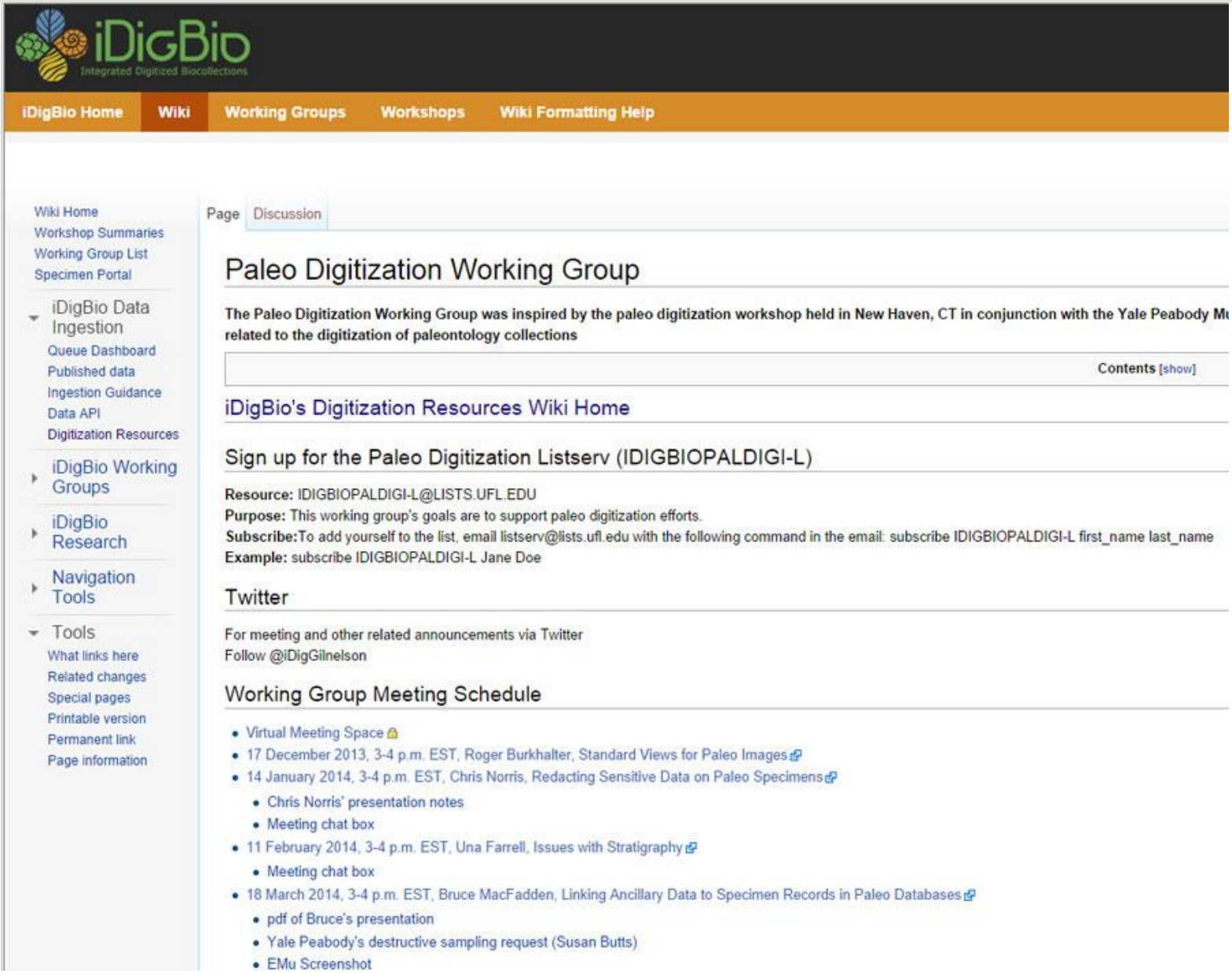
In March 2012, the iDigBio Steering Committee established a series of preparation-specific digitization training workshops focused on helping collections managers get started with and/or enhance local digitization programs, all to be held at host institutions.

- 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)
- Specify for Paleo Collections (Lawrence, KS, May 2014)
- Small Herbarium Digitization (Boise, Botany 2014, July 2014)
- Leveraging Digitization Knowledge Across Multiple Domains (Santa Barbara, October 2014)

Product Oriented: Collaborating on Best Practices

- 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)

Wikis
Working groups
Listservs



iDigBio
Integrated Digitized Biocollections

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Paleo Digitization Working Group

The Paleo Digitization Working Group was inspired by the paleo digitization workshop held in New Haven, CT in conjunction with the Yale Peabody Mu related to the digitization of paleontology collections

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iDigBio's Digitization Resources Wiki Home

Sign up for the Paleo Digitization Listserv (IDIGBIOPALDIGI-L)

Resource: IDIGBIOPALDIGI-L@LISTS.UFL.EDU
Purpose: This working group's goals are to support paleo digitization efforts.
Subscribe: To add yourself to the list, email listserv@lists.ufl.edu with the following command in the email: subscribe IDIGBIOPALDIGI-L first_name last_name
Example: subscribe IDIGBIOPALDIGI-L Jane Doe

Twitter

For meeting and other related announcements via Twitter
Follow @iDigGilnelson

Working Group Meeting Schedule

- Virtual Meeting Space
- 17 December 2013, 3-4 p.m. EST, Roger Burkhalter, Standard Views for Paleo Images
- 14 January 2014, 3-4 p.m. EST, Chris Norris, Redacting Sensitive Data on Paleo Specimens
  - Chris Norris' presentation notes
  - Meeting chat box
- 11 February 2014, 3-4 p.m. EST, Una Farrell, Issues with Stratigraphy
  - Meeting chat box
- 18 March 2014, 3-4 p.m. EST, Bruce MacFadden, Linking Ancillary Data to Specimen Records in Paleo Databases
  - pdf of Bruce's presentation
  - Yale Peabody's destructive sampling request (Susan Butts)
  - EMu Screenshot

Paleo Digitization Working Group Activities

Listserv: IDIGBIOPALDIGI-L

Working Group Wiki

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

Paleo-specific Workshops and Symposia:

- Paleo Digitization, Yale Peabody Museum, Sept 2013
- Paleo Imaging, University of Texas, Apr 2014
- Specify for Paleo Collections, University of Kansas, May 2014
- Geological Society of America annual conference, Oct 2014

Webinar Series and Working Group Meetings

Paleo Data Working Group

- Providing recommendations on paleo schemas to Specify and iDigBio

Paleo Digitization Workflows Working Group

- Completed and will publish a set of digitization workflows for paleo collections

Thank you!