



iDigBio
Integrated Digitized Biocollections

ADBC and iDigBio USA Initiative on Digitization

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Overview

- ADBC and iDigBio
- Goals of iDigBio
- Information portal at iDigBio
- Important (unique?) characteristics of iDigBio
- Current USA activities to extend scope of digitization activities

Advancing Digitization of Biodiversity Collections

- Facilitate use of biodiversity data to address scientific, environmental and economic challenges
 - Researchers, educators, general public, policy-makers
- Enable digitization of biodiversity collections data
 - Develop efficient and effective digitization standards and workflows
 - Respond to cyberinfrastructure needs
- Provide portal access to biodiversity data in a cloud-computing environment
 - Expand participation: partners and data sources
- 2 Types of project: Infrastructure and Digitization
- Funded for 10 years, USD 10 million

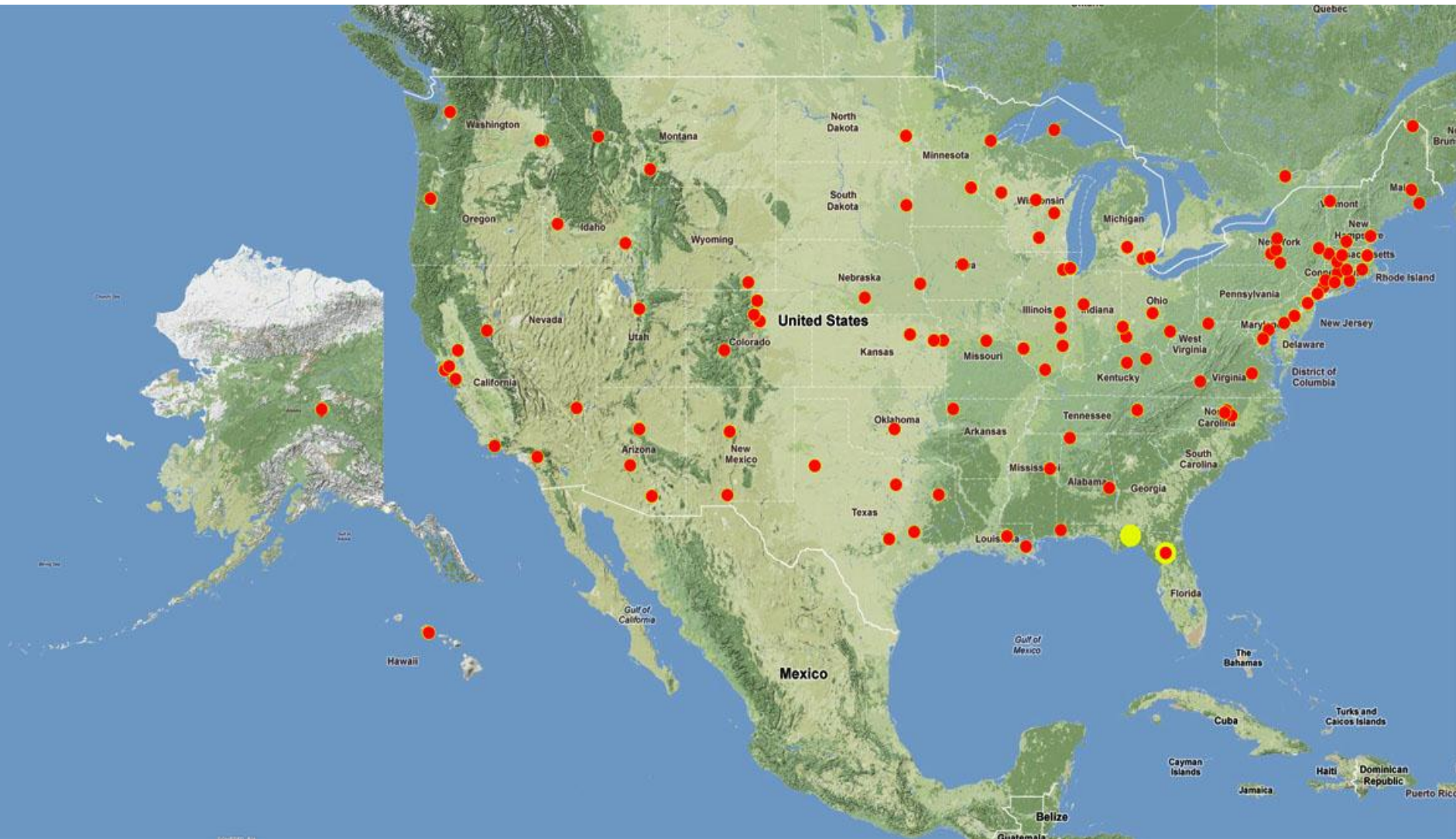


- Integrated Digitized Biocollections
 - National resource (“HUB”) for digitization of institutional natural history collections

Funded Thematic Collections Networks (TCNs)

- **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 Anthropods Network (SCAN):** A Model for Collections Digitization to Promote Taxonomic and Ecological Research (Northern Arizona University)

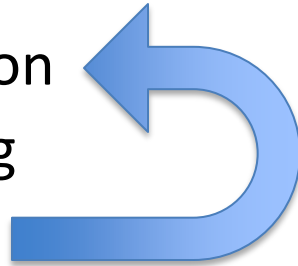
National Resource (iDigBio), Thematic Collection Networks (TCNs), and Collaborators



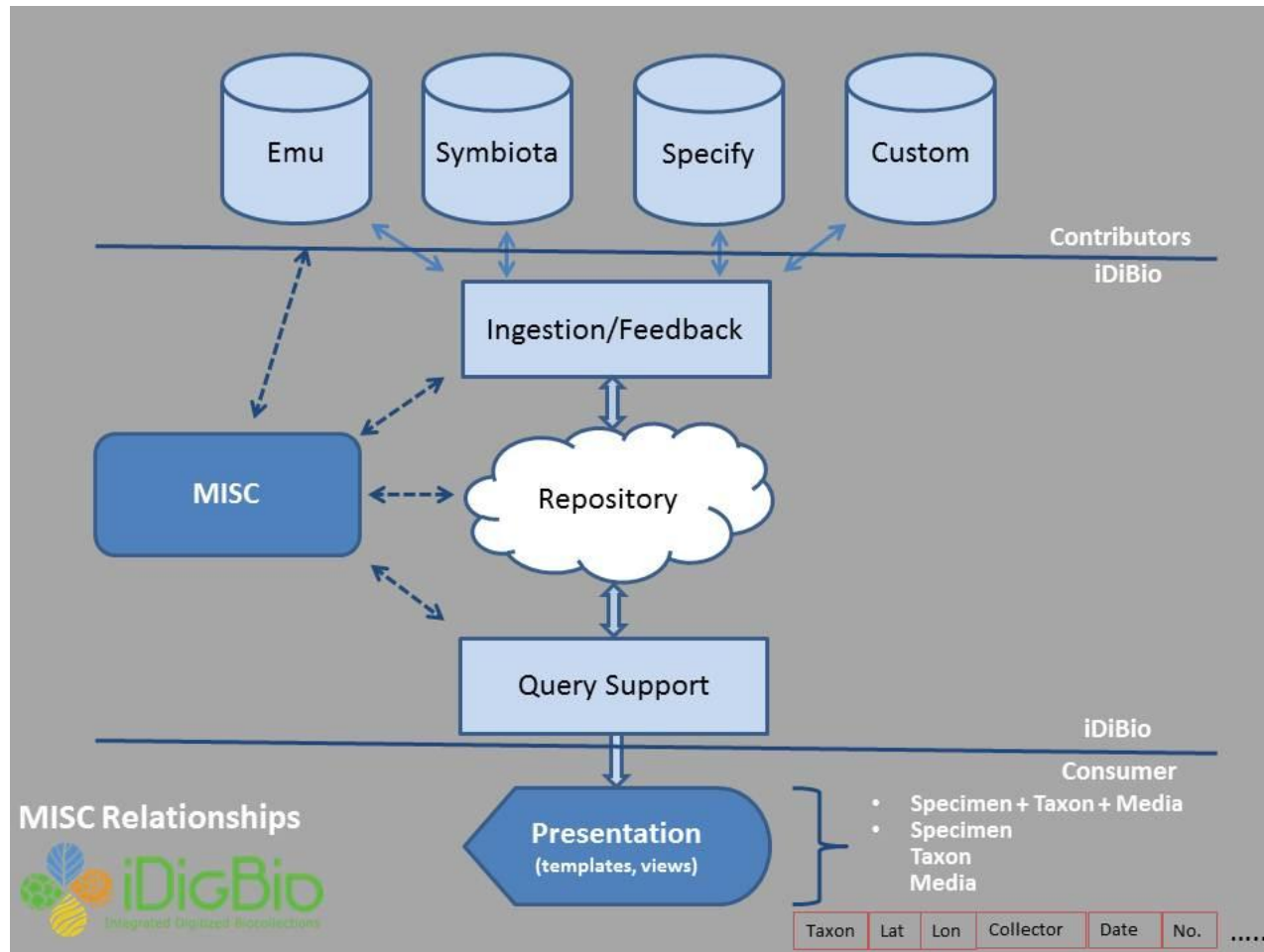
7 TCNs with 130 participating institutions

Goals and Activities of ADBC

- Enable digitization
- Specimen-based data
 - Label data (georeferenced)
 - Images
 - Metadata and ancillary data
- Acquiring information
 - Label digitization
 - Georeferencing
 - Imaging
- Use and attribution
 - Provide information for specific uses
 - Track information use and feedback



iDigBio Repository of Specimen Info



- MISC: Minimum Information Standards for Collections

iDigBio Data Portal v.0



[Home](#) [Specimen Records](#) [Media Records](#) [Tutorial](#)

[Feedback?](#) [Need Help?](#) [Contact Us!](#)

Welcome to the iDigbio Data Portal

If you're already familiar with our portal's interface, go on in and start searching.

If this is your first time here, you might consider browsing through [our tutorial](#).

The iDigBio Portal and APIs are currently serving:

2 Recordsets

391656 Specimen Records

235016 Media Records

Our data is formatted based on the [Darwin Core](#) and [Audubon Core](#) standards.

In this issue:

[Blog](#) | [Workshops](#) | [Protocols](#) | [People](#)

Blog

Specimen Portal Technology Preview



iDigBio's technology preview is the first release of a semi-annual release cycle for a specimen database and portal that will eventually contain over 1 billion vouchered specimen records. [Learn More...](#)



iDigBio Data Portal: Tutorial

Welcome to the iDigbio Data Portal

Major Page Elements

The screenshot shows the iDigBio Data Portal interface. The main navigation bar is outlined in red and contains links for Home, Specimen Records, Media Records, Tutorial, and Feedback? Need Help? Contact Us!. The search area is outlined in green and includes a search box, search buttons, and instructions. The main content area is outlined in blue and displays specimen records for *Hyalopoa lanatiflora*, *Carex vesicaria*, and *Trisetum spicatum*. The top scientific names section is outlined in yellow and lists various species names.

Current Selection

Viewing all documents!

Basic Search **Advanced Search**

Press ESC to close auto-complete suggestions. If no auto-completions match your desired search, close auto-complete and try it anyways. You may still get results from the full-text search of the records.

[Change Autocomplete Terms](#)


Top Scientific Names

[artia](#) [calamagrostis](#) [carex](#) [drosophila](#)
[ethreostoma](#) [festuca](#) [fundulus](#) [gambusia](#) [holbrooki](#)
[leporinus](#) [melanogaster](#) [micropterus](#)
[notropis](#) [perca](#) [poa](#) [pandanus](#) [salix](#) [sip](#) [ssp](#) [var](#)

Displaying 1 to 10 of 430169 [Go To Page#](#)

[Prev](#) [1](#) [2](#) [3](#) [...](#) [43016](#) [43017](#) [Next](#)


Hyalopoa lanatiflora



- [iDigBio ID: 08263d51-e3f3-47fd-9c0d-13204fb0892a](#)
- Locality: no higher geography recorded. No specific locality recorded.
- Recorded By: unknown

[Hyalopoa lanatiflora no higher geography recorded. No specific locality recorded. unknown](#)


Carex vesicaria



- [iDigBio ID: 082c56ee-9383-47fd-99b8-29bd89753365](#)
- Locality: no higher geography recorded. No specific locality recorded.
- Recorded By: unknown

[Carex vesicaria no higher geography recorded. No specific locality recorded. unknown](#)

Trisetum spicatum



- [iDigBio ID: 082a75cb-ed3b-444d-9fcf-687fd4c59a7](#)
- Locality: Alaska, Anchorage Quad, Chugach State Park Twin Peaks, Eklutna Valley, Twin Peaks trail
- Recorded By: LuDean C. Marvin

[Trisetum spicatum Alaska, Anchorage Quad, Chugach State Park](#)

The major elements of the iDigBio Portal UI are as follows:

Outlined in Red - The main menu bar ([read more](#))

Outlined in Green - The search box ([read more](#))

iDigBio Data Portal: Searching...

Browse and Search Specimen Records

Current Selection

[remove all](#)

[\(x\) dwc_scientificname_t:carex](#)

[\(x\) text:alaska](#)

Basic Search

[Advanced Search](#)

Press ESC to close auto-complete suggestions. If no auto-completions match your desired search, close auto-complete and try it anyways. You may still get results from the full-text search of the records.

[Change Autocomplete Terms](#)

Displaying 1 to 10 of 6626

Go To Page#

1

[Prev](#)

[1](#)

[2](#)

[3](#)

[...](#)

[662](#)

[663](#)

[Next](#)

Carex brunnescens



- [iDigBio ID: e9a69134-4d94-403e-a644-cfda095b2e7b](#)
- [Locality: Alaska, McGrath Quad upper Kuskokwim R. basin, Farewell Lake, morainic till near Farewell Lake](#)
- [Recorded By: William Holland Drury, Jr.](#)

[Carex brunnescens Alaska, McGrath Quad upper Kuskokwim R. basin, Farewell Lake, morainic till near Farewell Lake William Holland Drury, Jr.](#)

Carex maritima



- [iDigBio ID: a38f5d15-16fe-4561-991c-e6a465e51536](#)
- [Locality: Alaska, Killik River Quad, Gates of the Arctic National Park and Preserve Killik R. valley, vic. mouth of Ivisak Cr. on E bank of river](#)
- [Recorded By: Carolyn L. Parker, Bruce Bennett, Nikki Guldager](#)

[Carex maritima Alaska, Killik River Quad, Gates of the Arctic National Park and Preserve Killik R. valley, vic. mouth of Ivisak Cr. on E bank of river Carolyn L. Parker, Bruce Bennett, Nikki Guldager](#)

iDigBio Data Portal: record info

iDigBio ID: a38f5d15-16fe-4561-991c-e6a465e51536

dwc:kingdom	Plantae
dwc:recordedBy	Carolyn L. Parker, Bruce Bennett, Nikki Guldager
dwc:coordinatePrecision	3615
dwc:scientificNameAuthorship	Gunn.
dwc:lifeStage	Undetermined
dcterms:language	en
id	http://www.morphbank.net/180113
dwc:eventDate	2002-07-24 00:00:00.0
dwc:country	UNITED STATES
dwc:collectionCode	UAM Botany, ALA
dwc:verbatimLatitude	68.3000030517578
dwc:locationID	http://www.morphbank.net/148841
dwc:basisOfRecord	Specimen
dwc:continent	NORTH AMERICA
dwc:preparations	Pressed and dried

Georeference Data



The blue marker indicates the location of the current record, the red points are locations of similar specimens in the iDigBio system.

Record Image



What Makes iDigBio Unique?

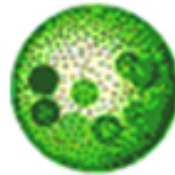
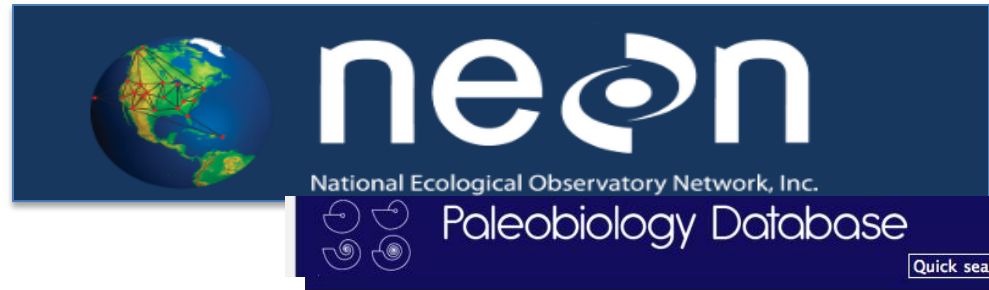
- **Ingest all specimen-based data**, not only a restricted set of selected data elements, with emphasis on **GUIDs**
- Ingest textual **specimen records**, and associated still **images, videos, audio, and other media**
- Ingest **linked documents and associated literature**, including field notes, ledgers, monographs, related specimen collections, etc.
- Provide **virtual annotation capabilities** and **track annotations** back to the originating collection
- Facilitate sharing and integration of data relevant to biodiversity research

What Makes iDigBio Unique?

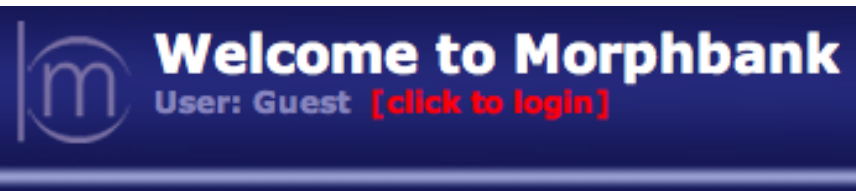
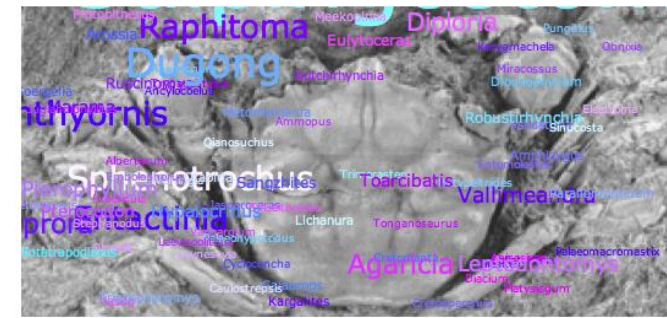
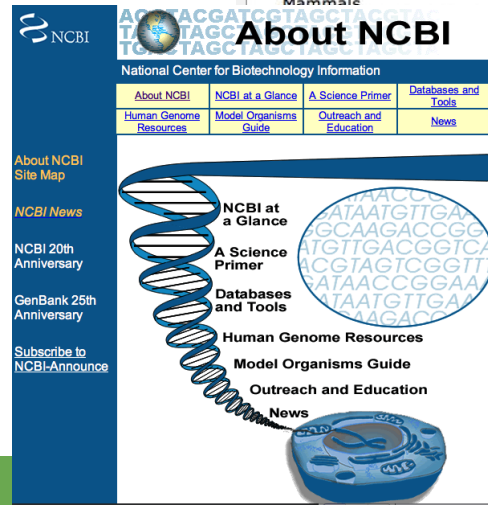
- **Ingest all specimen-based data**, not only a restricted set of selected data elements, with emphasis on **GUIDs**
- Ingest textual **specimen records**, and associated still **images**, **video**
- Ingest **field research** and **computational environment** data, including **collections**
- Provide **virtual annotation capabilities** and **track annotations** back to the originating collection
- Facilitate sharing and integration of data relevant to biodiversity research

Linking Collections to...

- Ecology
- Paleontology
- Genomics
- Living Collections
- Other repositories



UTEX

NCBI About NCBI National Center for Biotechnology Information

About NCBI Resources	NCBI at a Glance Model Organisms Guide	A Science Primer Outreach and Education	Databases and Tools News
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NCBI at a Glance A Science Primer Databases and Tools Human Genome Resources Model Organisms Guide Outreach and Education News



Interacting with iDigBio

- As part of a TCN
- As a PEN (participating in an existing network)
- Other collaborations (NSF requires collaboration with iDigBio for collections-based projects)
- Tool development and integration
- Hosting a workshop or convening a working group
- Visiting Scholar program
- Education and outreach

Some Active iDigBio Working Groups

- Augmenting OCR (aOCR)
- Cyberinfrastructure
- Developing Robust Object to Image to Data (DROID)
- Georeferencing Working Group (GWG)
- Minimum Information Standards, Authority Files, & Semantics
- Paleontology
- Public Participation in Digitization

Network Integrated Biocollections Alliance

- “Strategic Plan for Establishing a Network Integrated Biocollections Alliance” 2009
 - 10 year plan resulted in ADBC project
- Recent NIBA workshop to develop a detailed implementation plan for NIBA
 - Develop innovative new data capture and use technologies
 - Provide decision-makers with access to timely information that informs responses to society’s grand challenges
 - Strengthen and increase communication and collaboration within the biodiversity collections community
 - Educate and train a workforce that can more effectively and efficiently curate biodiversity collections and data and thereby support 21st century research, education, and outreach

Outstanding issues for iDigBio/ADBC/NIBA

- **ADBC:** \$100,000,000 for 10 years
 - Will not be sufficient to complete the national digitization effort
- **Storage**
 - iDigBio will provide short-term primary storage when requested and 'temporary archival storage' as required
 - Not the permanent solution but part of the solution
- **Sustainability**
 - Important to emphasize the importance of collections to any study of biodiversity);
 - There are no funds for research which makes it difficult to demonstrate progress and value

Outstanding issues for iDigBio/ADBC/NIBA

- **Integration** with federal collections
- **Metrics:** How do we measure our success?
- **Workflows** have not been developed for certain types of collections making it difficult for potential collaborators to join in the national effort
- **Inclusiveness:** Although 130 institutions are involved, the majority of institutions with collections are not
 - How do we bring others in and support their efforts?
 - How do small collections ‘get in the game’?

www.idigbio.org



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Digitization Workflow Workshop Report

Members of the collections community gather in Gainesville, FL to produce optimized specimen digitization workflows at the Developing Robust Object-to-Image-to-Data (DROID) Workshop. Tremendous participant insight holds the promise for informative documentation that will benefit all collections conducting or initiating digitization activities.

Upcoming Events

Botany 2012

Saturday, July 7, 2012 (All day)

Updated: Digitizing Plant Collections Workshop

Monday, September 17, 2012 (All day)

Public Participation in Digitization of Biodiversity Specimens Workshop

Friday, September 28, 2012 (All day)

[more events >>](#)

Blog Archives



iDigBio

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