



## NATIONAL DIGITIZATION EFFORT

# NIBA and NSF's Advancing Digitization of Biodiversity Collections (ADBC) Program

## History Progress

Larry M. Page, Director iDigBio

## 2010. Strategic Plan for the Network Integrated Biocollections Alliance (NIBA)

“The plan outlines the elements required for an inclusive, vibrant, partnership of US biological collections that collectively will **document the nation’s biodiversity resources and create a dynamic electronic resource** that will serve the country’s needs in answering critical questions about the environment, human health, biosecurity, commerce and the biological sciences.”

Collections community



**NSF's Advancing Digitization of Biodiversity  
Collections (ADBC) Program  
(1<sup>st</sup> funding in 2011)**



**2013. Implementation Plan for the  
Network Integrated  
Biocollections Alliance (NIBA)**

# U.S. National Science Foundation

*In response to the scientific community*

## Advancing Digitization of Biodiversity Collections Program (ADBC)

- The goal of **ADBC** is to *remove the inaccessibility of data* through **digitization**: information online -- for researchers, educators, policymakers, etc.



\$100 million over 10 years  
non-federal collections



## **Coordinating Center Advancing Digitization of Biodiversity Collections (ADBC)**



### Principal Investigators:

Greg Riccardi, Digitization & Training (FSU)

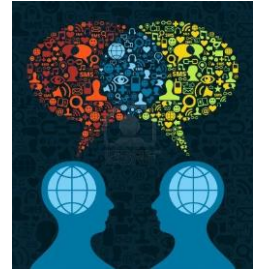
Jose Fortes, Computational Activities (UF/ACIS)

Pam Soltis, Research Collaborations (FLMNH)

Bruce MacFadden, E&O Collaborations (FLMNH)

Larry Page, Director (FLMNH)

Project manager: David Jennings

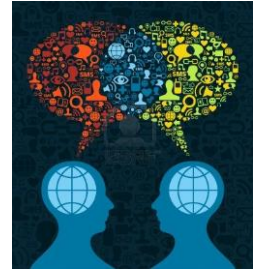


## Coordinating Center for the ADBC Program



- Engage the collections community
- Facilitate digitization and mobilization of data
- Provide a search portal
- Facilitate research and outreach





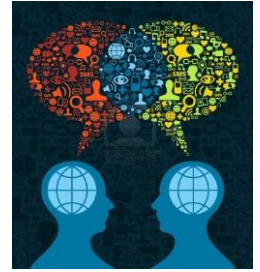
## Coordinating Center for the ADBC Program



- Engages the collections community
- Facilitates digitization and mobilization of data
- **3,084 participants from 482 institutions at 82 workshops**
- **2,486 participants at 74 webinars**







## Coordinating Center for the ADBC Program



- Provides a search portal
- Facilitates research and outreach

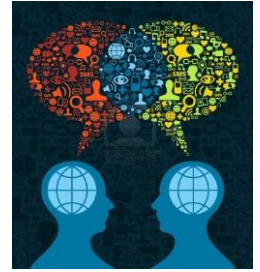
**Portal has 842 datasets with  
73M specimen-based records  
≈220M specimens, and 16M  
associated media records**







## Thematic Collections Networks (TCNs)



**Groups of non-federal institutions**

- **Digitize specimen-based data around a research theme**
- **Digitizing = databasing, georeferencing, imaging**
- **Provide data to iDigBio's search portal**
- **Collaborate on research and outreach**

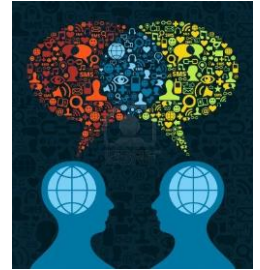


## 18 Thematic Collections Networks (TCNs)

- **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 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*)
- Developing a Centralized Digital Archive of **Vouchered 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*)

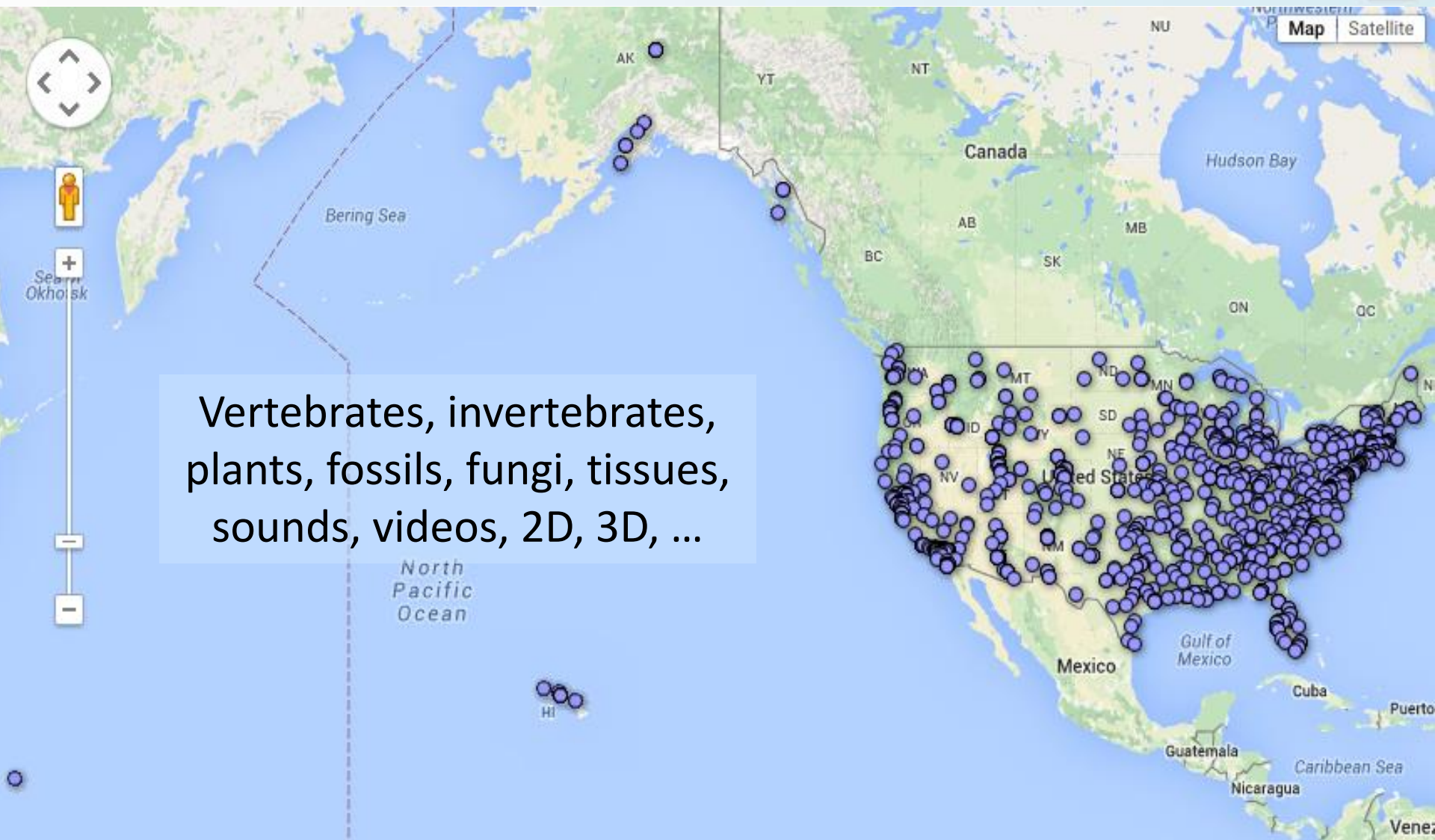


## Thematic Collections Networks (TCNs)



- **18 TCNs + 15 PENs**
- **450 collections at 289 institutions**





Vertebrates, invertebrates,  
plants, fossils, fungi, tissues,  
sounds, videos, 2D, 3D, ...

**495 collections in 289 institutions in 50 states (18 TCNs + 17 PENs)**



# BIODIVERSITY



Thank you!

Photos: M. Jeffords & G. Paulay