

# Digitization of Biodiversity Collections in the U.S.A.

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SiBBR Workshop on Digitization

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# 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 at least  
**1 billion biological and paleontological records**  
over the 10-year life of the project.

# Where is iDigBio?



Atlantic Ocean



[www.f](http://www.f)

# Biodiversity Informatics

**The single largest  
source of information  
on biological diversity.**

*1,500 natural history collections*

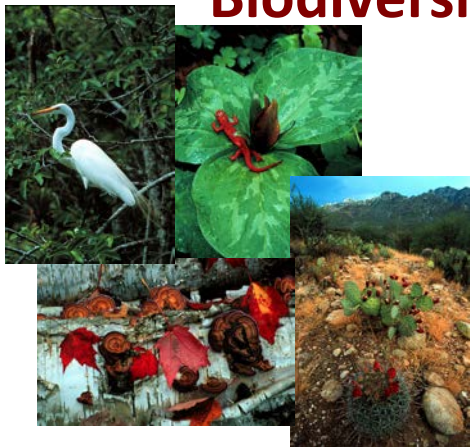


**1 billion specimens  
in USA**



**3 billion specimens  
globally**

# Biodiversity



**Collections: Specimens, Images, DNA**



*Benefits*

**billions of  
specimens**

*Benefits*

**Environmental Policy  
Management, Use,  
Protection**

**New  
Discoveries  
Understanding  
Appreciation**

**Research**

**Education  
Outreach**

## Step 1: Make a plan and get funding

- Commission a report to demonstrate need
  - Network Integrated Biocollections Alliance
    - NIBA strategic plan
  - Called for establishing a national program to fund digitization
- Fund a program at the National Science Foundation
  - Advancing Digitization of Biodiversity Collections (ADBC)

## Advancing Digitization of Biodiversity Collections (ADBC)

- The goals of ADBC are
  - to remove this inaccessibility through digitization
  - to put information online so that researchers, educators, students, natural resource managers, environmentalists, and policymakers have access.
- \$100 million over 10 years to digitize specimen-based data in U.S. collections

## Step 2: Call for proposals

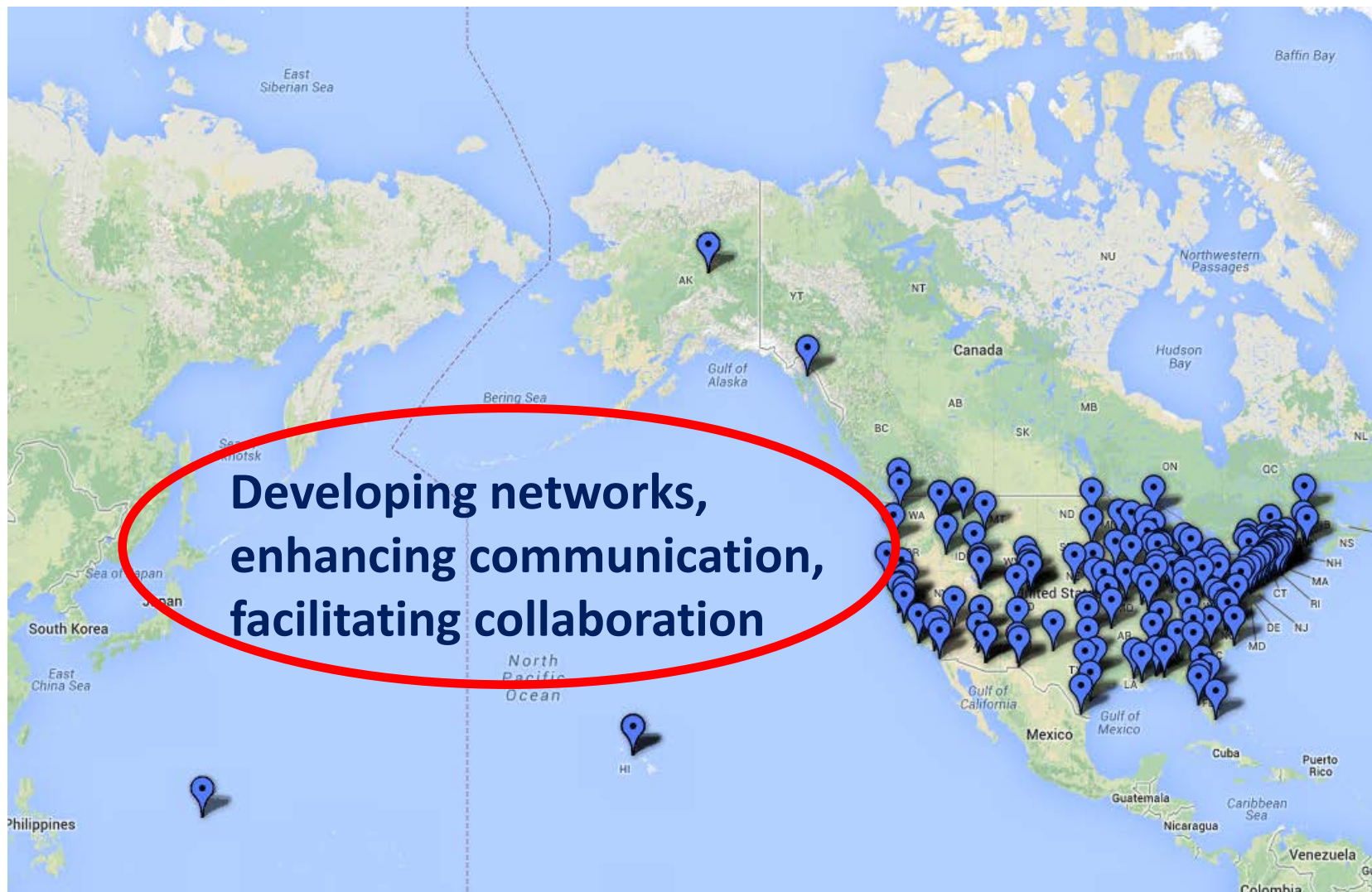
- Thematic Collections Networks
  - Digitize specimen information to enable research
  - Allow community to decide priorities
- Home Uniting Biocollections (HUB)
  - Enable digitization
  - Provide access to data
  - Build communities of practice
  - Reach out to communities



# Thirteen Thematic Collections Networks

- **InvertNet:** An Integrative Platform for **Research on Environmental Change**, Species Discovery and Identification
- **Plants, Herbivores, and Parasitoids:** A Model System for the **Study of Tri-Trophic Associations**
- **North American Lichens and Bryophytes:** **Sensitive Indicators of Environmental Quality** and Change
- **Digitizing Fossils to Enable New Syntheses in Biogeography** - Creating a PALEONICHES-TCN
- **The Macrofungi Collection Consortium:** Unlocking a Biodiversity Resource for Understanding **Biotic Interactions, Nutrient Cycling and Human Affairs**
- **Mobilizing New England Vascular Plant Specimen Data to Track Environmental Change**
- **Southwest Collections of Arthropods Network (SCAN):** A Model for Collections Digitization to **Promote Taxonomic and Ecological Research**
- **iDigPaleo: Fossil Insect Collaborative:** A Deep-Time Approach to Studying Diversification and **Response to Environmental Change**
- **Vouchered Animal Communication Signals**
- **The Macroalgal Herbarium Consortium:** Accessing 150 Years of Specimen Data to Understand Changes in the **Marine/Aquatic Environment**
- **Aquatic Non-indigenous Fish, Mollusks, Algae, and Plants** Threatening North America's **Great Lakes**
- **InvertEBase:** Reaching Back to See the Future: Species-rich Invertebrate Faunas Document Causes and **Consequences of Biodiversity Shifts**
- **The Key to the Cabinets:** Building and Sustaining a Research Database for a Global **Biodiversity Hotspot**

# Advancing Digitization of Biodiversity Collections (ADBC)



To date: 10 TCNs, 152 unique institutions, ~276 projects, 50 states

## Where to go from here?

- How to sustain activities?
  - Digitization projects?
  - Support for digitization improvements?
- How to sustain data infrastructure?
  - Data persistence?
  - Data quality?
  - Data portal?
- How to sustain commitment
  - Governmental?
  - Community?