

Agenda
Using Biodiversity Specimen-Based Data to Study Global Change Workshop
Missouri Botanical Garden, St. Louis
2-3 December 2015

Rationale: This workshop will concentrate on uses of digitized data to address key research questions related to global change, while also addressing the issue of spotty geographic and taxonomic coverage of data in iDigBio and other aggregators.

Day 1
Morning

8:00 – Shuttle from hotel to MOBOT/CBEC

8:30 – **Welcome – iDigBio** – Larry Page
Missouri Botanical Garden – Jim Miller
Saint Louis University – Jason Knouft

8:45 – Goals of the workshop – Pam Soltis, iDigBio, University of Florida

9:00 – Institutional/taxonomic variation in digitization strategies – Gil Nelson, iDigBio, Florida State University

9:15 – iDigBio search portal and API – Renato Figueiredo, iDigBio, University of Florida

Examples of Global Change Studies (with emphasis on specimen-based data)

9:30 – Rosemary Gillespie, University of California, Berkeley Initiative in Global Change Biology

9:50 – Jason Knouft, Department of Biology, Saint Louis University

10:10 – BREAK

10:40 – John LaSalle , Atlas of Living Australia

11:00 – Volker Mosbrugger, Director, SENCKENBERG ('World of Biodiversity'), Germany

11:20 – Paulo Borges, PORBIOTA, Universidade dos Açores, Portugal

11:40 – Mark Schildhauer, National Center for Ecological Analysis and Synthesis, NCEAS, UCSB

12:00 – LUNCH

Afternoon

Continuing...Examples of Global Change Studies

1:00 – Jorge Soberon, Ecology and Evolutionary Biology, University of Kansas

1:20 – Erin Saupe, Department of Biology, Yale University

1:40 – Charlotte Germain-Aubrey, iDigBio, University of Florida

What data are being digitized in ADBC/TCNs?

2:00 – Overview – Deb Paul, iDigBio, Florida State University

2:10 – Reports from TCN representatives on types of data and topics under consideration for research (5 TCNs @ 10 minutes each = 50 minutes)

Katja Seltmann, Plants, Herbivores, and Parasitoids: A Model System for the Study of Tri-trophic Associations

Andrew Short, *InvertNet: An Integrative Platform for Research on Environmental Change, Species*

Discovery and Identification

Nick Zemp, *North American Lichens and Bryophytes: Sensitive Indicators of Environmental Quality and Change*

Patrick Sweeney, *Mobilizing New England Vascular Plant Specimen Data*

Bruce Lieberman, *Digitizing Fossils to Enable New Syntheses in Biogeography - Creating a PaleoNICHES*

3:00 – BREAK

3:30 – Reports from TCN representatives on types of data and topics under consideration for research (9 TCNs @ 10 minutes each = 90 minutes)

Barbara Thiers, *The Macrofungi Collection Consortium: Unlocking a Biodiversity Resource for Understanding Biotec Interactions, Nutrient Cycling and Human Affairs*

Neil Cobb, *Southwest Collections of Arthropods Network (SCAN): A Model for Collections Digitization to Promote Taxonomic and Ecological Research*

Dena Smith, *Fossil Insect Collaborative: A Deep-Time Approach to Studying Diversification and Response to Environmental Change*

Christopher Neefus, *The Macroalgal Herbarium Consortium: Accessing 150 Years of Specimen Data to Understand Changes in the Marine/Aquatic Environment*

Rudiger Bieler, *InvertEBase: Reaching Back to See the Future: Species-rich Invertebrate Faunas Document Causes and Consequences of Biodiversity Shifts*

Zack Murrell, *The Key to the Cabinets: Building and Sustaining a Research Database for a Global Biodiversity Hotspot (SERNEC)*

Kenneth Cameron, *Documenting the Occurrence through Space and Time of Aquatic Non-indigenous Fish, Mollusks, Algae, and Plants Threatening North America's Great Lakes*

Edward Davis, *Documenting Fossil Marine Invertebrate Communities of the Eastern Pacific - Faunal Responses to Environmental Change over the last 66 million years*

Mia Maltz, *The Microfungi Collections Consortium: A Networked Approach to Digitizing Small Fungi with Large Impacts on the Function and Health of Ecosystems*

4:50 – Day 1 Wrap-up

5:30-8:00 – Reception at MoBot

8:00 – Shuttle from reception to hotel

**Day 2
Morning**

8:00 – Shuttle from hotel to MOBOT/CBEC

8:30 – **Agenda for Day 2** – Pam, Rosemary, Jason, Larry

Discussions/breakout groups: Questions and Issues

8:45 – Global Change Discussion: What questions related to global change can be addressed with data in iDigBio (and other aggregators)? [All 3 breakout groups address this question]

Breakout 1 Discussion Notes: <https://goo.gl/hbXB8w>

Breakout 2 Discussion Notes: <https://goo.gl/27L0QY>

Breakout 3 Discussion Notes: <https://goo.gl/tCqBqs>

9:30 – Reports from breakout groups

10:00 – BREAK

10:30 – Topics 1, 2, and 3. [One breakout group to address each]

1. How do we deal with irregularities and unevenness of data for addressing these questions? (led by Jun Ying Lim, University of California, Berkeley)

Breakout 1 Discussion Notes: <https://goo.gl/hbXB8w>

2. What analytical and computational issues limit the use of these data? (led by Andy Rominger, University of California, Berkeley)

Breakout 2 Discussion Notes: <https://goo.gl/27L0QY>

3. What are the sources of environmental data (climate, soil, hydrology, land use) for the past, present, and future, and what are their limitations? (led by Jason Knouft)

Breakout 3 Discussion Notes: <https://goo.gl/tCqBqs>

11:15 – Reports from breakout groups

11:45 – Read and revise reports on Google Docs

12:00 – LUNCH

**Day 2
Afternoon**

Discussions/breakout groups: Moving to the next level

1:00 – Identification of areas for research; formation of working groups; discussions for potential collaborations

2:00 – Reports from breakout groups

2:30 – Read and revise reports on Google Docs

2:45 – BREAK and extended discussions

3:45 – Day 2 Wrap-up

4:00-5:30 – Tour of the Monsanto Building (Herbarium and Library)

5:30 – Shuttle from the Monsanto Building to hotel

Evening – Dinner on your own