2010-2020: Advancing Digitization of Biodiversity Collections

Built over the past 200 years there exists a sizable national investment in curation of the physical objects in scientific collections and the associated data residing in them. These data provide the baseline from which to further biodiversity research and provide critical information about gaps in our knowledge of life on earth.

NSF’s ADBC program seeks to

• enhance and expand the national resource of digital data

Label data capture, specimen imaging

• improve access to digitized information (including images) residing in the scientific collections across the US

Online service, Web portals, GBIF, etc

• to advance scientific knowledge
The national resource is structured at three levels

– vouchered scientific collections across the United States
– a central coordinating organization: iDigBio
– a series of thematic networks based on an important research theme = TCN and PEN grants
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Florida Museum of Natural History, Gainesville
University of Florida
Visit the iDigBio web portal
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2011-2016: 18 TCN grants
2012-2016: 17 PEN grants
2017: 2 TCN + ? PEN
InvertEBase

Reaching Back to See the Future:
Species-rich Invertebrate Faunas Document Causes and Consequences of Biodiversity Shifts in North America

Petra Sierwald, PI
Rudiger Bieler, Co-PI
Field Museum of Natural History, Chicago
Four –Year Project: Six institutions, 10 collections

EF 14-02667, Petra Sierwald, Rudiger Bieler
EF 14-00993, Andy Deans
EF 14-02697, Elizabeth Shea
EF 14-01176, Jason Bond
EF 14-04964, Diarmaid O’Foighil, Taehwan Lee
EF 14-02785, Gavin Svenson

FilteredPush
EF 14-01450, James Hanken

PEN 2016: Chicago Academy of Sciences
EF 16-01700, Dawn Roberts

InvertEBase Portal:
Additional collections posting their data

Symbiota Web Portal
North American Invertebrates

- Terrestrial and aquatic mollusks: 2014 first inclusion of mollusks in ADBC
- Terrestrial and aquatic insects, arachnids, myriapods
- Digitize, mobilize, georeference up to 3Mill specimen data
- Three museums will serve data first time online (DMNH, AUMNH, CMNH)
- **Arthropod data served on**

- Mollusk Data served on InvertEBase Portal
- Posting data from eight additional Collections
Thematic Collections Networks
Each Thematic Collections Network (TCN) is a network of institutions with a strategy for digitizing information that addresses a particular research theme, such as impacts of climate change or biota of a region. Once digitized, data are easily accessed and available for other research and educational use. Other institutions and collections may join an existing TCN as a Partner to Existing Network (PEN). The following are the TCNs, and any associated PENs, currently funded by the Advancing Digitization of Biodiversity Collections [1] (ADBC) project:

Award Year 2016:
(TCN) The Mid-Atlantic Megalopolis: Achieving a greater scientific understanding of our urban world [4] (MAM)

Award Year 2015 [5]:
(TCN) Documenting Fossil Marine Invertebrate Communities of the Eastern Pacific - Faunal Responses to Environmental Change over the last 66 million years[7] (EPICC)

Award Year 2014 [8]:
(TCN) Documenting the Occurrence through Space and Time of Aquatic Non-indigenous Fish, Mollusks, Algae, and Plants Threatening North America's Great Lakes[9] (GLI)
(TCN) InvertEBase: Reaching Back to See the Future; Species-rich Invertebrate Faunas