

InvertEBase

Reaching Back to See the Future:

**Species-rich Invertebrate Faunas Document
Causes and Consequences of Biodiversity Shifts in
North America**

Petra Sierwald, PI

Field Museum of Natural History, Chicago

The **Field**
Museum



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Four –Year Project: Six institutions, 10 collections



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The Frost Entomological Museum

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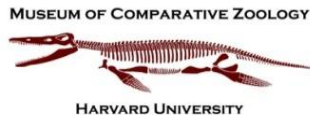
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North American Invertebrates

- Terrestrial and aquatic mollusks: 2014 first inclusion of mollusks in ADABC
- Terrestrial and aquatic insects, arachnids, myriapods
 - Collaboration with existing TCNs with Arthropod focus
- Three museums will serve data first time online (DMNH, AUMNH, CMNH)
- Automate retroactive data capture through use of
 - Label imaging
 - Voice Recognition
 - OCR
- Digitize, mobilize, georeference up to 3Mill specimen data



Progress Year 1:

- Insects: 134,000 records newly entered
 - 22,000 specimen images, label imaging in progress for subsequent transcription
- Mollusks: 16,000 records newly entered

Data cleaning:

- Throughout all InvertEBase TCN existing databases, special focus of efforts at DMNH, Auburn

Development of taxonomic authority files:

- MolluscaBase/WoRMs file uploads (5,000+ name combinations)
- Collaboration with SCAN: North American Arthropod names in progress



Workflow improvements:

- Voice recognition: field note transcriptions for station data

Data Management:

- Collections maintaining their own databases
- Optimizing batch uploading and direct data entry via EMu and *Specify*, etc.
- Database conversions in progress at participating collections


Data Management Issues:

- Translation from other database systems (e.g., Filemaker to *Specify* conversion)
- Connecting TaxonWorks to Symbiota (e.g., lacking IPT instance)
- Cleaning previously entered data while entering new specimen records

Open Access of Data:

- Data posted on existing institutional web interfaces
- Data posting on joint Symbiota portal: in progress at all TCN collections
- MolluscaBase/WoRMs file uploads (5,000+ name combinations to date)
- Best practice documents for Lepidoptera posted on website (Frost Entomological Museum)

Research use of data: efforts initiated

- Frost Entomological Museum: transcribed specimen label data for niche modeling and analyses
- **InvertEBase, invertnet, Notes from Nature:**  invertnet
submission of NSF Postdoctoral Fellowship in Biology: Dragonfly expeditions: using historical collections and citizen science to study changes in beneficial freshwater insects and their habitats

Management of the network including oversight and processes

- Virtual group meeting via AdobeConnect
- Annual PI meetings
- Individual site visits

Looking at Year 2:

Two PEN proposals submitted from collections in

- Illinois
- Arizona

Future Collection Digitization

of collections in

- Virginia
- North Carolina
- Puerto Rico

Outreach:

- Exhibit development
- Importance of specimen collection
- Data capture and data use

