

# InvertEBase

**Reaching Back to See the Future:**

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

Rüdiger Bieler

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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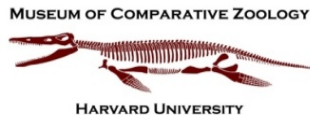
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## North American Invertebrates

- Terrestrial and aquatic mollusks
- 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 3 Million specimen data



## 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

### 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

### **Research use of data: efforts initiated**

- Frost Entomological Museum: transcribed specimen label data for niche modeling and analyses
- Development of postdoctoral projects (e.g., “Dragonfly Expeditions”: using historical collections and citizen science to study changes in beneficial freshwater insects and their habitats)

