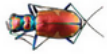


# Symbiota & InvertEBase



**DATA MANAGEMENT PORTAL, SOFTWARE, AND  
THEME FOR NEW OR ESTABLISHED  
MOLLUSK COLLECTIONS**



SYMBIOTA INTRODUCTION ▸

ACTIVE SYMBIOTA PROJECTS

SPECIMEN SEARCH ENGINE ▸

INVENTORIES ▸

IDENTIFICATION KEYS

IMAGE LIBRARY

DATA MANAGEMENT ▸

MEETINGS / PRESENTATIONS

SYMBIOTA WORKSHOPS

SYMBIOTA GOOGLE GROUP

## ACTIVE SYMBIOTA PROJECTS

The following biodiversity projects use the Symbiota Virtual Biota software package to establish biodiversity portals with specific regional and/or taxonomic scopes. Each portal represents the community of collaborating researchers that manage the core scientific data. If you are interested in becoming a data contributor for an already established data portal, contact the portal administrator for more information on gaining access to their data editing tools. For more information on what is involved in being a data provider, read the [Specimen Integration](#) page.

### Quick Index

- [SEINet Networked of North American Plant Portals](#)
- [Consortium of North American Bryophyte Herbaria \(CNABH\)](#)
- [Consortium of North American Lichen Herbaria \(CNALH\)](#)
- [Consortium of Northeastern Herbaria Portal \(CNH\)](#)
- [Consortium of Small Vertebrate Collections \(CSVColl\)](#)
- [Cooperative Taxonomic Resource for American Myrtaceae \(CoTRAM\)](#)
- [Herbario Virtual Austral Americano \(HVAA\)](#)
- [Macroalgal Herbarium Consortium Portal](#)
- [Mycology Collections Data Portal \(MycPortal\)](#)
- [Symbiota Collections of Arthropods Network \(SCAN\)](#)
- [InvertEBase Data Portal](#)
- [Great Lakes Invasives Network](#)
- [Neotropical Arthropod Portal \(NAP\)](#)
- [Neotropical Flora Portal](#)
- [Madrean Discovery & Madrean Archipelago Biodiversity Assessment Project](#)
- [Documenting Ethnobiology in Mexico and Central America \(DEMCA\)](#)
- [Consortium of Pacific Herbaria \(CPH\)](#)
- [Open Herbarium](#)
- [Virtual Flora of Wisconsin](#)



- Open source, data management software that provides shared tools to the collections community to facilitate research (e.g., checklists)
- Institutions retain their identity and control of data. Collections can either provide a snapshot of a resident database or enter/manage direct within Symbiota
- Data is arranged in projects or themes
  - Parallels the Thematic Collections Networks (TCNs) in NSF's ADBC program



## InvertEBase Data Portal Homepage

Search Collections

Map Search

Dynamic Checklist

Image Library

Search Images

Welcome Elizabeth!

My Profile

Logout

Sitemap

**Welcome to InvertEBase:** *reaching back to see the future: species-rich invertebrate faunas document causes and consequences of biodiversity shifts*

The rapid biodiversity change in North America has significant effects on essential ecosystem services, from impact on soil health and nutrient cycling, to agriculture, forestry and water quality. Effective monitoring of changes in biodiversity requires easy electronic access to historical specimen baseline information for temporal and regional species diversity comparisons, which can facilitate informed land management decisions. Vast amounts of specimen data are housed within the nation's natural history collections, but most of these data are not yet readily accessible as digital resources. The TCN "InvertEBase" is a 4-year collaborative effort to digitize specimen records from ten arthropod and mollusk collections housed at six major US museums in six states, three of them ranking among the top 10 collections in the world. They include the Field Museum of Natural History (Chicago, IL), Cleveland Museum of Natural History (CMNH, OH), Auburn University Museum of Natural History (AUMNH, AL), University of Michigan Museum of Zoology (MI), Delaware Museum of Natural History (DMNH, DE), and Frost Entomological Museum at Pennsylvania State University (PA). InvertEBase will digitize de novo ~ 2.4 million georeferenced specimen records as well as integrate and mobilize data for 3.9 million terrestrial and aquatic arthropod and invertebrate specimens with special focus on the United States fauna. InvertEBase will greatly expand the taxon and geographic coverage of existing TCNs, and include the phylum Mollusca for the first time; DMNH, AUMNH, and CMNH will serve all of their invertebrate specimen data online for the first time. This project will significantly automate specimen data capture by utilizing optical character and voice-recognition technologies. The digitized data from this project will be immediately deployed for habitat-based distribution modeling and analyses.



This project made possible by the National Science Foundation awards EF 14-02667 to P. Sierwald and R. Bieler (Field Museum), EF 14-00993 to A. Deans (Penn State), EF 14-02697 to E. Shea (Delaware Museum of Natural History), EF 14- 04964 to D. O'Foighil (Museum of Zoology, UMichigan), EF 14-01176 to J. Bond (Auburn University), and EF 14-02785 to G. Svenson (Cleveland Museum of Natural History), and EF 14-01450 to J. Hanken (Harvard University). These awards are made as part of the National Resource for Digitization of Biological Collections through the Advancing Digitization of Biological Collections program and all data resulting from this award will be available through the national resource (iDigBio.org).

## InvertEBase Data Portal

The TCN "InvertEBase" is a 4-year collaborative effort to digitize specimen records from ten arthropod and mollusk collections housed at six major US museums in six states, three of them ranking among the top 10 collections in the world.

<http://invertebase.org/portal/index.php>

Symbiota is a shared database so issues of data standardization are key

### Problem:

Selecting only the DMNH collection:

- Search for “Philippines” – 0 results
- Search for “Republic of the Philippines” – 476 results

Selecting all collections:

- Search for “Philippines” – 42,951 results
- Search for “Republic of the Philippines” – 476 results

### Solution:

- Using wildcards will strain the very large database;
- Symbiota will create a thesaurus that will cross link these two “different” search terms

Questions? Contact:

Symbiota

Ed Gilbert [egbot@asu.edu](mailto:egbot@asu.edu)

InvertEBase

Petra Sierwald [psierwald@fieldmuseum.org](mailto:psierwald@fieldmuseum.org)

Liz Shea [eshea@delmnh.org](mailto:eshea@delmnh.org)

iDigBio

Joanna McCaffrey [jmccaffrey@flmnh.ufl.edu](mailto:jmccaffrey@flmnh.ufl.edu)

Thanks!