BIODIVERSITY DATA PORTALS

POWERED BY SYMBIOTA

OVERVIEW

Symbiota is an open-source software for digitally curating and publicly serving biodiversity specimen data. A Symbiota data portal can act as a biodiversity collection's primary database of record and has powerful, built-in tools for digitization, data cleaning, and standardization. The web-based interface enables easy access to searching, mapping, and downloading data, but editing is restricted to authenticated users that have been given collection-level access. Over 1,200 biodiversity collections currently use Symbiota-based portals – such as SEINet (**swbiodiversity.org**), the Bryophyte Portal (**bryophyteportal.org**), the Lichen Portal (**lichenportal.org**), and Ecdysis (**ecdysis.org**) – as their primary data management and publishing system.

AT-A-GLANCE

- **Most widely used** biodiversity data management software in the United States

- Enables **1,900+ collections** to participate in the global biodiversity data ecosystem

- Provides the backbone for **60+ data portals** containing **89 million specimen records** and associated media, including **484k+ records from Kansas** and **391k+ records** of **threatened and endangered species**, many of which are federally protected

- **Globally engaged** as an Associate Participant Node of the Global Biodiversity Information Facility (GBIF) **and nationally** as a division of Integrated Digitized Biocollections (iDigBio)

- Used to maintain **species inventories**, determine areas and species of **conservation concern**, improve the **biodiversity literacy** of students, understand the effects of **environmental change**, and **inform robust resource management** decisions

- Maintained by the University of Kansas Biodiversity Institute's **Symbiota Support Hub**

FOR MORE INFORMATION:
SYMBIOTA.ORG
HELP@SYMBIOTA.ORG

PROJECT GOALS

Mobilize biological collections data to **expand data access** to **drive novel research.**

Provide a **robust** and **globally accessible** suite of data management and aggregation tools through the **progressive enhancement of the Symbiota codebase**.

Increase community capacity for data mobilization through the technical and social facilitation of Symbiota user communities.

What is the Symbiota Support Hub?

The Symbiota Support Hub ("SSH") was established to provide for the technical and social implementation of Symbiota-based data portals as a part of the national effort to digitize preserved biological collections. The SSH team is composed of scientists, software developers, informatics specialists, and collections professionals based out of the University of Kansas Biodiversity Institute and Natural History Museum. **Together, Symbiota and the SSH serve as key infrastructure for the mobilization of biocollections data.**

Products & Achievements

Highlights from 09/2021 - 12/2025

Portal Community Stats

▷ 60+ Symbiota portals supported by the SSH
▷ 52 Symbiota portals hosted on SSH-managed IT infrastructure
▷ 89.5M records shared by SSH-hosted portals from 1.9k+ natural history collections
▷ 8,671 all-time commits to the primary Symbiota code base
▷ 1,247 collections use SSH-hosted portals as their primary collections management system to curate 31.7M records
▷ 522 collections publish data from SSH-hosted portals, contributing 21.7M records to GBIF
  ○ To this end, as a GBIF Publisher and Associate Participant Node, SSH has endorsed 58 organizations and 107 datasets as well as hosted 18 GBIF installations
  ○ SSH-hosted occurrences in GBIF have received 3,389 citations in published literature
▷ 5,812 active users made 11.9M edits to specimen records in SSH-hosted portals in 2025

Community Engagement

▷ 6,009 Help Desk tickets received with 3,163 related tasks
  ○ 1,500+ users from 600+ institutions and 66 portals served through the Help Desk
▷ 2,396 engaged participants (>500 unique) via virtual training events
▷ 58 presentations and 11 posters presented at professional meetings
  ○ 24 additional presentations made at other events (e.g. invited webinars)
▷ 20 workshops, conference sessions, and special-interest meetings organized
▷ 144+ pages of versioned help & tutorial documentation maintained via Symbiota Docs
▷ 165 tutorial videos and webinar recordings made available via YouTube (93 public, 72 unlisted) with 16,201 views and 315 subscribers

Symbiota Support Hub Team

Leadership: Nico Franz, Edward Gilbert, Jenn Yost
NSF-supported staff: Katelin Pearson, Gregory Post, Lindsay Walker
Supporting members: Samanta Orellana, Mark Fisher, Skylar Franz, Nikita Salikov, Logan Wilt

Specimen examination for a study of a fungal pathogen
Helianthus L. and *Helianthus petiolaris* N
Kathryn A. Sparks, 2008
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