

Details

Diversity Workbench – Software components for building and accessing biodiversity information (DWB)

The modularized Diversity Workbench (=DWB) (www.diversityworkbench.net) represents a virtual research environment for multiple scientific purposes with regard to management and analysis of life sciences data. The framework is appropriate to store different kinds of bio- and geodiversity data and facilitates the processing of ecological, molecularbiological, observational, collection and taxonomic data. It is capable and flexible enough to be applied as data storage unit for institutional data repositories. The DWB is set up on a xml-enabled relational database system. Clients of every database of the Workbench are used as stand-alone applications and provide supporting functions to clients of corresponding databases. This results in a high flexibility with regard to the conceptual design, enabling sophisticated user administration and a rapid setup of project-specific and user-adapted entry forms. Further, it facilitates the dynamic integration of web services and external data resources. Functions for field data gathering are provided by the application DiversityMobile (DFG-funded project presented under <http://www.diversitymobile.net>), designed for monitoring ecological and biological data, using mobile devices. The database DiversityCollection provides the option to export data to GBIF via the BioCase-Wrapper by using the TDWG standard schema ABCD. Beside the host institutions mentioned below the Museum für Naturkunde Berlin acts as a supporting institution. I

Address: Menzinger Straße 67
80638 München
Bayern
Deutschland
[To website](#)

Host Institution

Staatliche Naturwissenschaftliche Sammlungen Bayerns, SNSB IT-Zentrum

Menzinger Straße 67
80638 München
Bayern
Deutschland
<http://www.snsb.info/>

Universität Bayreuth, DNA-Analytik und Ökoinformatik

Geb. NWI, Universitätsstraße 30
95447 Bayreuth
Bayern
Deutschland

http://www.mycology.uni-bayreuth.de/mycology/de/forschung/proj/forschung_detail.php?id_obj=28481

Universität Bayreuth, Lehrstuhl für Angewandte Informatik IV Datenbanken und Informationssysteme

Universitätsstraße 30
95447 Bayreuth
Bayern
Deutschland
<http://www.ai4.uni-bayreuth.de/de/index.html>

Scientific Domain

Primary Subjects:

- Biology
- Geosciences (including Geography)

Secondary Subjects:

- Agriculture, Forestry, Horticulture and Veterinary Medicine

Category

Research data repositories

Scientific Services

For each component of the DWB we are providing a comprehensive documentation of the application and the information model online. The framework for these components is currently still under development as we continue to learn about the necessary components and the best approach to the modularization of biodiversity information. A draft paper distributed by G. Hagedorn in 2002 provided insight into the framework concept. In an initial phase during the BMBF programme BIOLOG-IT with the GLOPP project (2000 until 2003) a set of prototypes was developed in Microsoft Access. The prototype applications are still available. With the exception of DeltaAccess/DiversityDescriptions they are by now largely obsolete. Between 2003 and 2008 further applications were set up as part of the GBIF-D Mycology project using .Net technology and JAVA. Since 2006 the software development is continued as one of the general tasks of the SNSB IT Center. Starting with 2009 some advanced IT concepts and technical developments for smartphone apps became part of the DFG-funded DiversityMobile/ IBF infrastructure project. Certain GBIF relevant DWB-tools were optimized within the joint BMBF-funded research project GBIF-D "Kompetenzzentren innovativer Datenmobilisierung". DWB systems and services are used by the German Barcode of Life project and by three DFG-funded research infrastructure projects, namely BiNHum, IDES and MOD-CO. They are in work for the data management at several German herbaria for the JSTOR plant science network and for the data handling in the Flora of Bavaria.

Scientific Equipment

Keywords

- data management system
- biodiversity data
- ecological data
- observational data
- collection data
- taxonomic data
- German Barcode of Life project
- GBIF Germany
- Diversity GIS Editor
- DWB Workshops
- DiversityDescriptions
- DiversityMobile
- DiversityCollection
- virtual research environment
- mobile Datenerfassung

Networks

Global Biodiversity Information Network (GBIF)

<http://www.gbif.org/>

Catalogue of Life (CoL)

<http://www.catalogueoflife.org/>

German Federation for Biological Data (GFBio)

<http://gfbio.org>

Users per annum

Internal Users: 80

External Users in total: 250

External Users: 250

External Users in the EU:

External Users outside of EU: