



Diversity Workbench

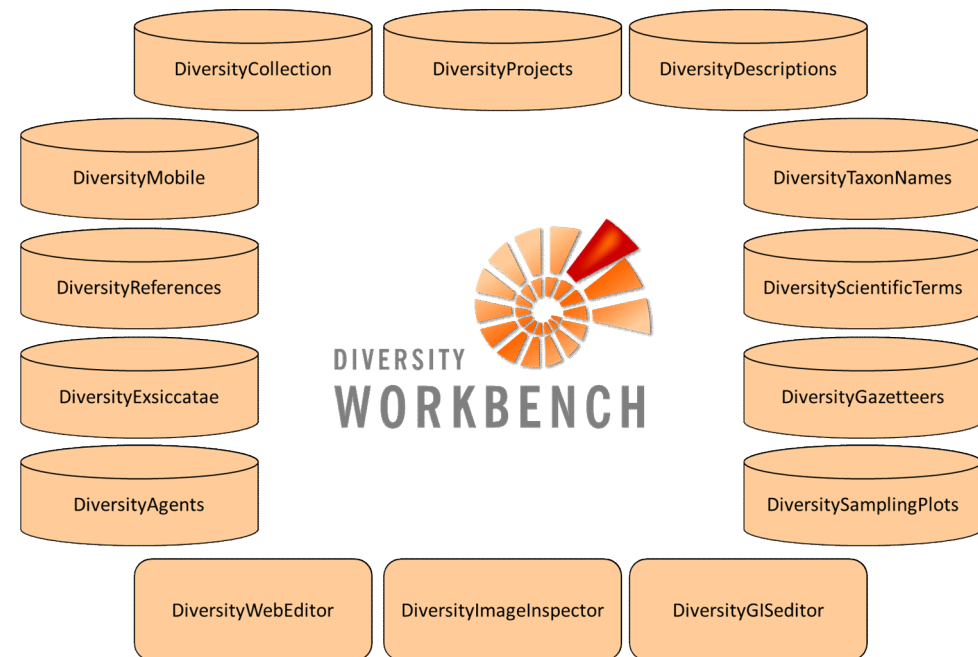
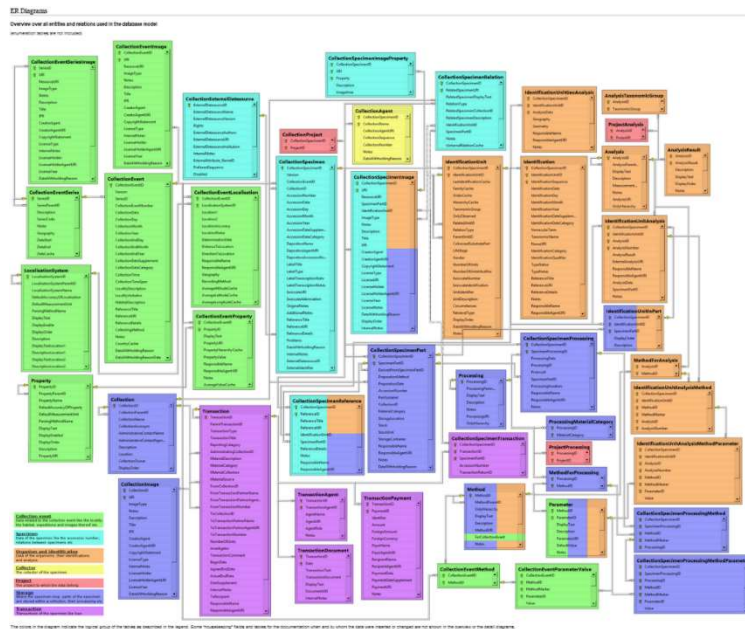
Einführung

Dagmar Triebel



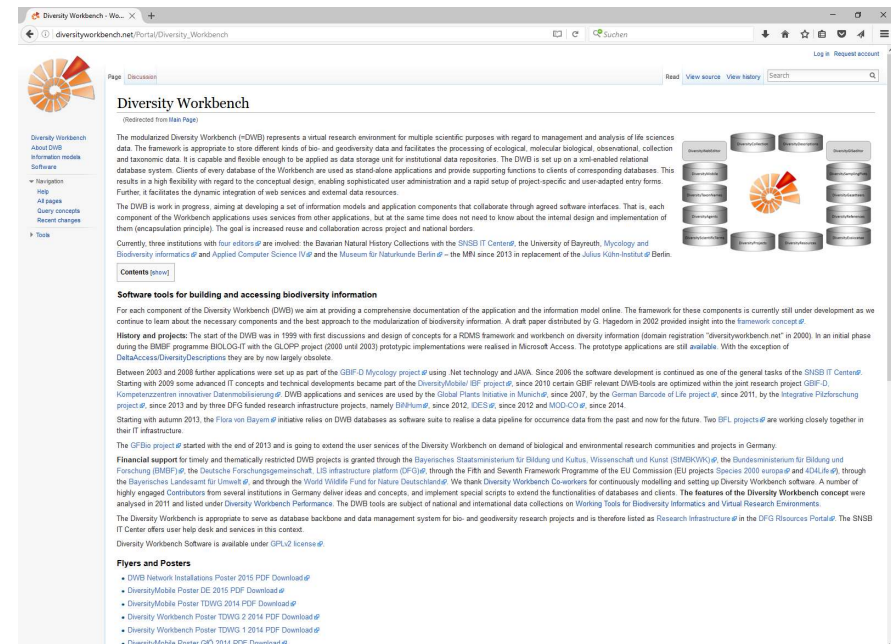
DWB – ein Set von Software Tools

- 11 SQL relationale Datenbanken, Schnittstellen zum Datenmanagement
- Implementierung v. a. an den SNSB



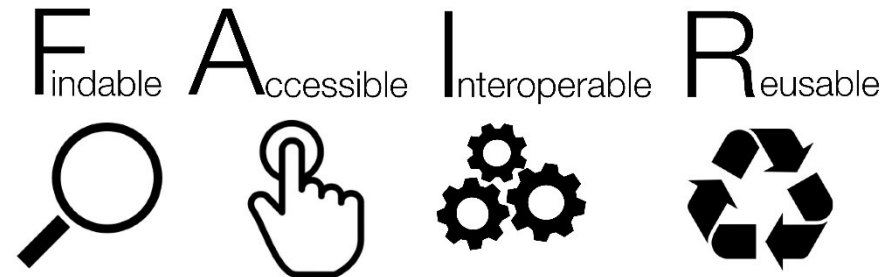
DWB – Philosophie des Teams

- DWB ist definiert als Langzeit-Software Projekt (seit 20 Jahren; 1999)
- Software ist frei verfügbar unter **www.diversityworkbench.net**
- **Open-Source-Implementierung** mit mehr als 1,8 Mio Code-Zeilen
- Software Design, Datenmodelle und ER-Schemata als **Open Access** publiziert
- „User-driven development“ (UDD) mit Software Tests durch derzeit mehr als 30 engagierte Anwender



DWB – Datenmanagement

- Fokus: Erzeugung und Prozessierung von FAIR data in Forschung und Sammlung
- DWB stellt eigene Dienste und Inhalte zur Verfügung (cloud services)
 - Terminologien
 - Vokabularien
 - Taxonomien
 - Gazetteers
- DWB wurde entwickelt für Anwender aus den Lebens- und Geowissenschaften (**Diversitätsdaten**)
- entwickelt für Datenerzeuger, die professionelle Datenkuration anstreben
- entwickelt für Datenerzeuger, die möglichst lange eine umfassende Datensouveränität behalten wollen



Technical documentation for the core applications and rich clients

Name of the database framework	Diversity Workbench (DWB)
DWB contact persons	T. Weibulat, D. Triebel at the SNSB IT Center ↗
Operating system server	MS Windows Server 2008 R2, 2012 R2
Database system	MS SQL-Server 2008 R2 to MS SQL-Server 2014 ↗
Clients	C# desktop applications (local clients) (and web APIs for various projects)
Operating system local clients	MS Windows XP (not recommended), MS Windows 7 to MS Windows 10
GIS functionalities	GIS-Editor , management of geometry and geography data
GUIs for data import	Import-Wizards, txt, CSV, xml in various schemes, xml/xslt, shapes in ESRI-Format
GUIs for data export/ reports	Export-Wizards, txt, CSV, xml in various schemes, xml/xslt, shapes in ESRI-Format
GUI language	default: english (multilingual through translation tables)
Open access	DWB software download
Open source	DWB SVN code repository ↗ , DiversityMobile GitHub repository ↗
Licenses	GPL v.2
Information models online	DWB data models
State of development	since 1999, ongoing
Code language, developer platform	C#, .Net Framework 3.5
User manuals	under DWB user manuals and with the download of the respective applications in the DWB Wiki
Training	DWB workshops ↗ for users and database administrators since 2007

Diversity Workbench – Schnittstellen zum Datenmanagement

The screenshot displays the Diversity Workbench v. 3.0.3.6 interface, which is a comprehensive tool for managing biological specimen and taxonomic data. The main window shows a list of specimens with columns for accession number, collection year, country, and locality. A sidebar on the left allows for filtering and sorting the data. Overlaid on this are several other windows:

- DiversityScientificTerms v. 3.0.0.0:** A window showing a hierarchical tree of scientific terms, with 'Indusium' selected. It includes a search bar and a list of related terms.
- DiversityAgents v. 3.0.0.3:** A window displaying a list of agents (people) associated with the specimens, including names, titles, and contact information.
- DiversityTaxonNames, Database: DiversityTaxonNames_Fungi v. 3.0.1.5:** A detailed window for managing taxonomic names. It shows a list of names, their synonyms, and their relationships. The 'Biatora sylvana' Korb. is highlighted, showing its various synonyms and the authority 'Korb. 1855'.

The interface is designed to facilitate the integration and management of data from different sources, ensuring consistency and accuracy in the database.

DWB – in Zahlen

- DWB Software Entwickler an den SNSB: **4**
- DWB Datenbanken auf SNSB Servern: **120**
- Aktive DWB Anwender, verwaltet in DWB Instanzen an den SNSB: **200**
- DWB Anwender geschätzt: mehr als **350**
- SNSB hostet Daten von rund **30** Organisationen, Arbeitsgruppen und Verbundprojekten aus der Forschung, verschiedene Hostingkonzepte, z. T. im Verbund mit **GFBio**
- eigenständige DWB Instanzen administrieren z.B. die SMNK, SMNS, SNSB, ZFMK



staatliche
naturwissenschaftliche
sammlungen bayerns



NATURKUNDE
MUSEUM
STUTT GART

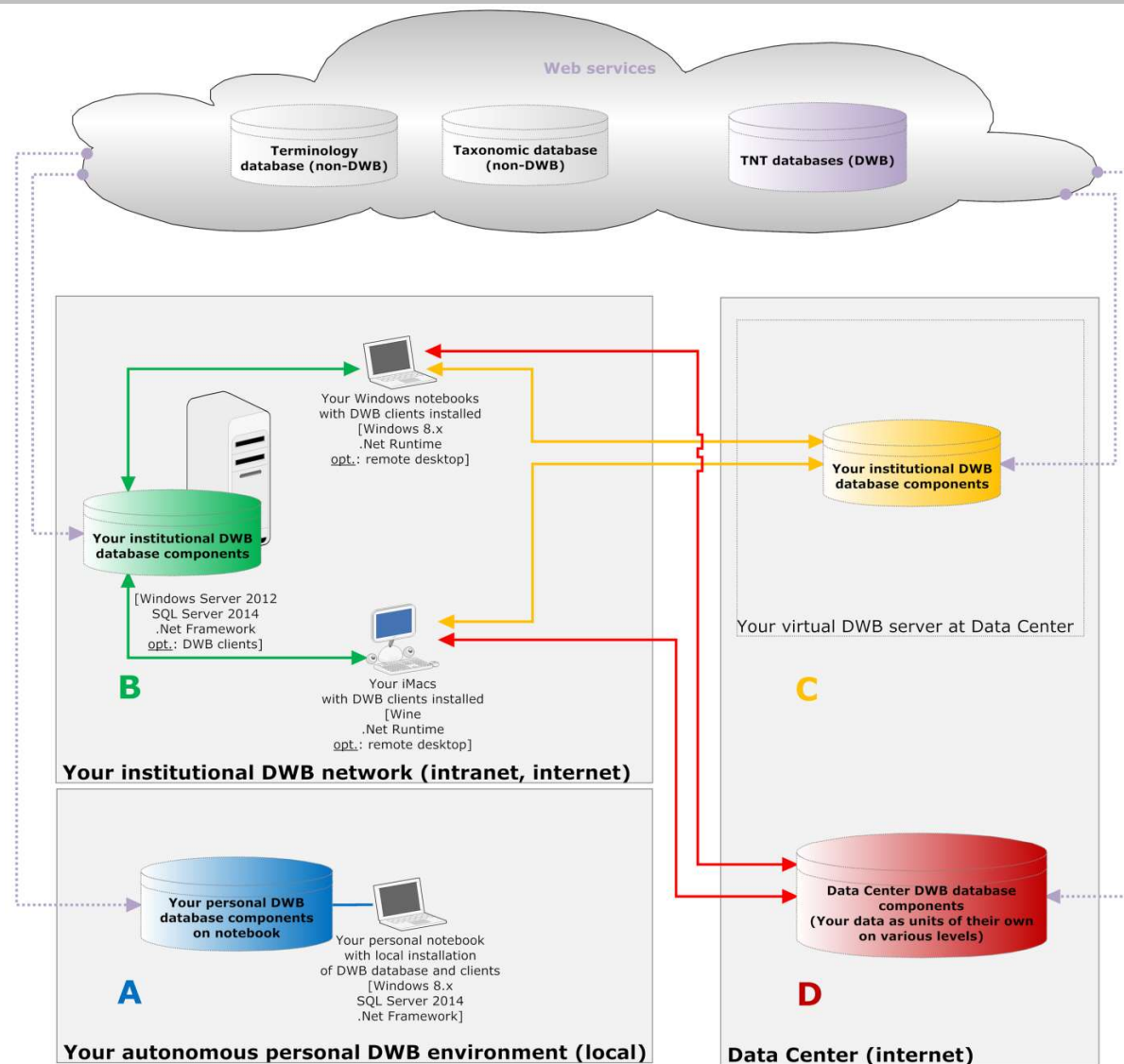


DWB – in Zahlen

- DWB Daten im **GFBio** Netzwerk: > **5.8 Mio** FAIR Daten (+ 8 Mio bereit zur Prozessierung über GFBio DC HIT Pipeline)
- DWB Daten im GBIF Netzwerk: > **14,3 Mio** FAIR Daten
- DWB Daten im Flora von Bayern-Netzwerk: > **13 Mio** FAIR Daten
- Seit 2007: mehr als **420** Teilnehmer an DWB Workshops in München (+ weitere Workshops in SMNK, SMNS und ZFMK)
- DWB Datenkuratoren an SNSB IT Center: dringend benötigt, User Help Desk: Kooperation **GFBio e.V.**



DWB – alternative Installationen und Hosting



DWB Taxon-Referenzlisten, automatisiert verbunden mit dem GFBio Terminology Server



Regionalised and Domain-specific Taxon Lists

The DWB REST Webservice for Taxon Lists is part of a Diversity Workbench (DWB) services network. It is delivering basic information on taxon names in use, synonyms, classification and German vernacular names of a number of groups of animals, fungi and plants.

The current focus is on domain-specific lists (checklists, taxon reference lists, red lists) from Germany under active curation by experts on taxonomy or floristics and faunistics. Each regionalised and domain-specific taxon list has its own history and objectives, is managed completely separately and has its own hierarchical classification. The DiversityTaxonNames (DTN) data resources accessed by the REST API may include additional taxon-related data useful, e. g., for regional nature conservation agencies and environmental projects. This information might be mobilised in a next step.

For more information please refer to DTN_Taxon_Lists_Services

[Home](#)[Content](#)[Developer Section](#)[Tools](#)[About](#)

CONTENT / EXTERNAL SERVICES

Web services connected to the Terminology Server

The following services have been integrated into the search [API](#):

- The Catalogue of Life: <http://cybertaxonomy.eu/cdmlib/rest-api-name-catalogue.html>
- The Integrated Taxonomic Information System (ITIS): http://www.itis.gov/web_service.html
- The World Register of Marine Species (WoRMS): <http://www.marinespecies.org/aphia.php?p=web-service>
- Fauna Europaea via PESI: <http://www.eu-nomen.eu/pesi/about-pesi>
- The GeoNames geographical database (Geonames): <http://www.geonames.org/export/web-services.html>
- The DWB REST Webservice for Taxon Lists (DTNtaxonlists): <http://services.snsb.info/DTNtaxonlists/rest/v0.1/static/api-doc.html>
- The Prokaryotic Nomenclature Up-to-Date Taxon list (PNU): <http://bacdiv.dsmz.de/api/pnu/>



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Imprint

DWB Daten in GBIF und BIB, dynamisch

PUBLISHER | SINCE MAY 3, 2010

Staatliche Naturwissenschaftliche Sammlungen Bayerns

ABOUT | HOME PAGE

14,321,919 OCCURRENCES | 76 DATASETS | 132 CITATIONS

Description: The Bavarian Natural History Collections (Staatliche Naturwissenschaftliche Sammlungen Bayerns, SNSB) are a public consortium of scientific research institutions, natural history museums and a botanical garden. They are a sub-item of the Bavarian State Ministry of Sciences, Research and the Arts. All these institutions are located in Bavaria and have a wide range of tasks and goals. The data provided by the SNSB are processed by the SNSB IT Center (www.snsb.info). The data ownership is as cited under the single data resources.

Endorsed by: [GBIF Germany](#)

Installations: [DiversityTaxonNames Server](#) • [BioCAsE Installation Staatliche Naturwissenschaftliche Sammlungen Bayerns](#)

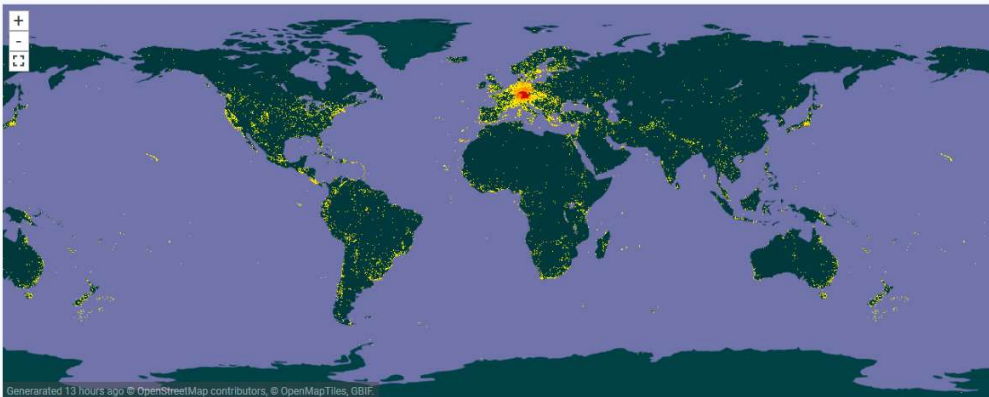
Administrative contact: [Dagmar Triebel](#)

Technical contact: [SNSB IT Center](#)

Country or area: [Germany](#)

Hosting: [77 datasets](#) (2 publishers • 2 countries)

6,215,783 GEOREFERENCED RECORDS



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Any year 1640 - 2018

EXPLORE

What is GBIF? | API | FAQ | Newsletter | Privacy | Terms and agreements | Citation | Acknowledgements

Contact | [GBIF Secretariat](#) Universitetsparken 15 | DK-2100 Copenhagen Ø | Denmark

[GBIF](#) Global Biodiversity Information Facility

[f](#) [t](#) [in](#) [v](#) [i](#)

FLORA VON BAYERN

Botanischer Informationsknoten Bayern

Kontakt, Impressum



[Wiki:Startseite](#) [Steckbriefe](#) [Checkliste](#) [Rote Liste](#) [Auswertungen](#) [Bibliographie](#)

Botanischer Informationsknoten Bay

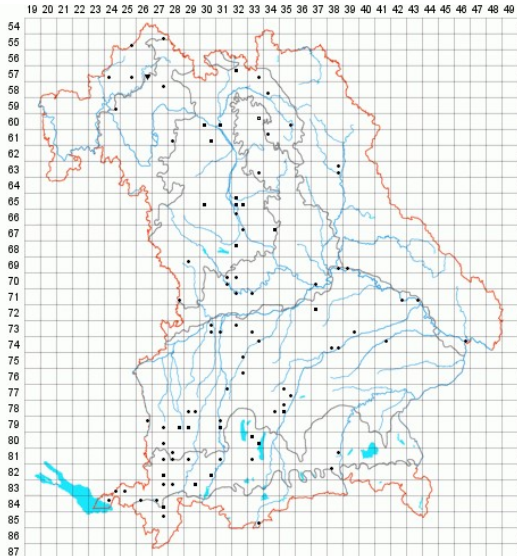
em Titel 'Botanischer Informationsknoten Bayern (E bfragen zur Gefäßpflanzenflora und präsentiert die E hutzrelevanten Kategorien sowie als Steckbriefdars

Der Botanische Informationsknoten Bayern wird al gepflegt. Seine Geschichte seit 2003 ist eng verbu

Zusammen mit der Wiki-Plattform 'Bayernflora (BF bereit und fördert dadurch die Kenntnisse um die k

Eine Übersicht über die Herkunft der publizierten C

ermeinen Fragen zum Projekt wenden Sie sich bitte liche Rückmeldungen zur BIB Darstellung von Ver



19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87

Arbeitsgemeinschaft Flora von Bayern - www.bayernflora.de

Ambrosia artemisiifolia
Beifußblättriges Traubenkraut

167 Angaben aus 92 Quadranten, davon: 144 Quadranten-Angaben
0 1/4-Quadranten-Angaben (1/16 MTB)
23 1/16-Quadranten-Angaben (1/64 MTB)

Kartenausgabe: 16.10.2015

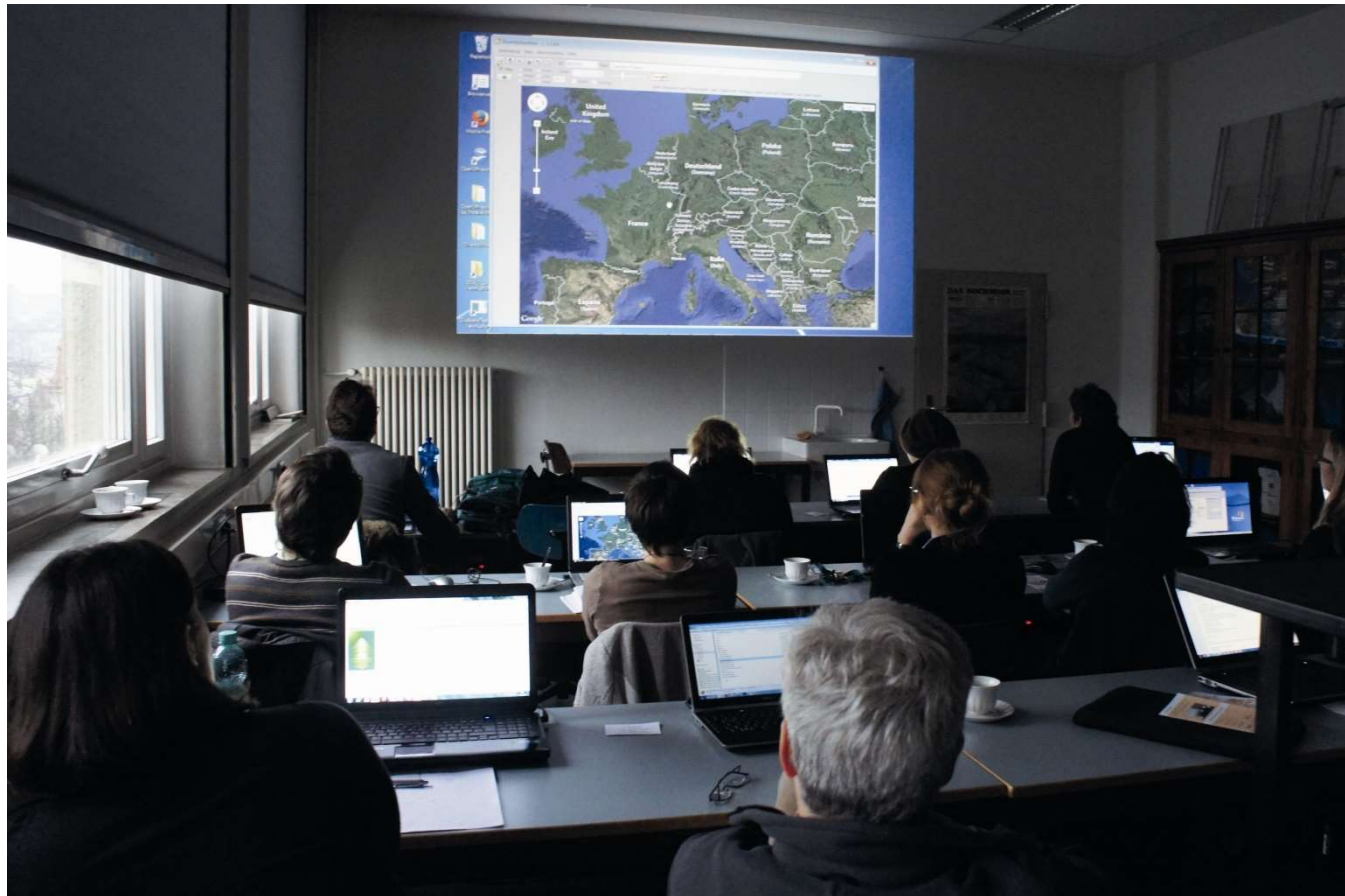
DWB Daten im GFBio VAT Tool



<https://www.gfbio.org/data/visualizeandanalyze>



DWB Workshop am 14. Dezember 2018



http://www.snsb.info/SNSBInfoOpenWiki/Wiki.jsp?page=DivWorkbenchWorkshop_36