

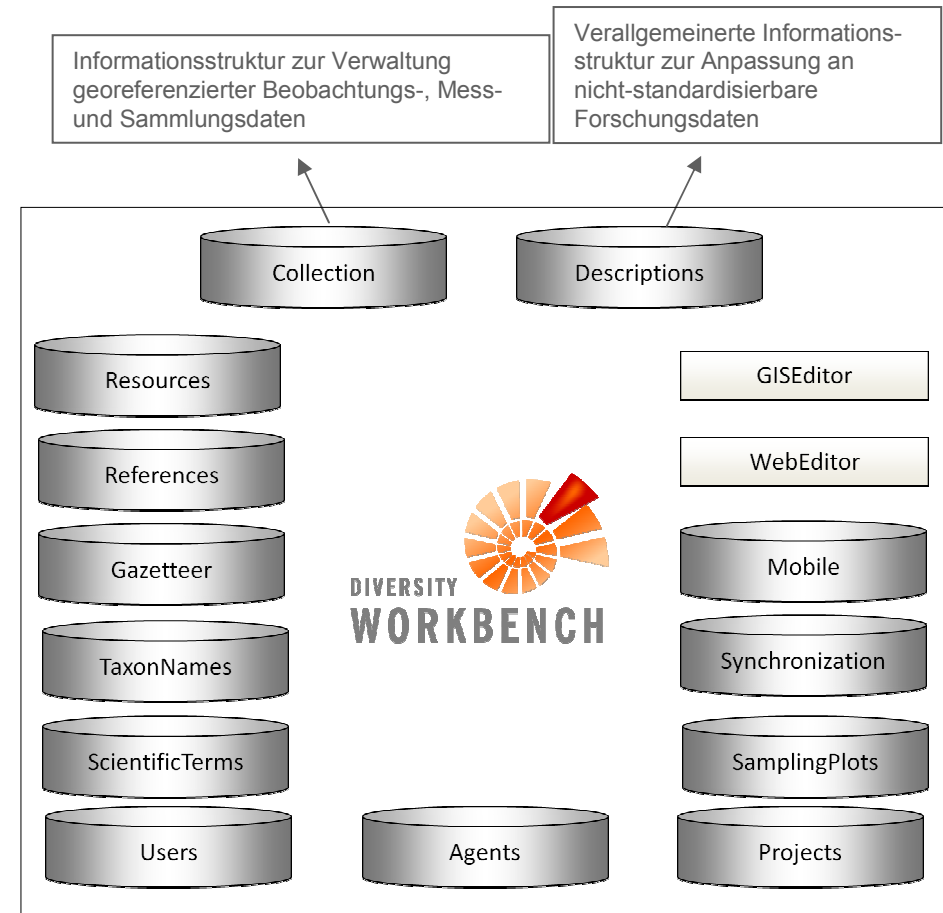
Diversity Workbench

Systemdesign, Datenflüsse, Netzwerke und Dienste

Dagmar Triebel

Diversity Workbench Framework

- Seit 1999 Modellierung (ER-Diagramme),
und Implementierung
- Datenbank-Komponenten („Module“) 14
- *Tabellen 233
- *Datenelemente/-attribute 1.902
- *Relationen-Tabellen 251
- Webschnittstellen/Clients 27
- *Quellcode-Zeilen > 706.567
(in 1.261 Quellcode-Files) (*Stand 12.2011)
- Seit 2007 Workshops für Anwender 21
 - Teilnehmer 186
 - Institutionen 43

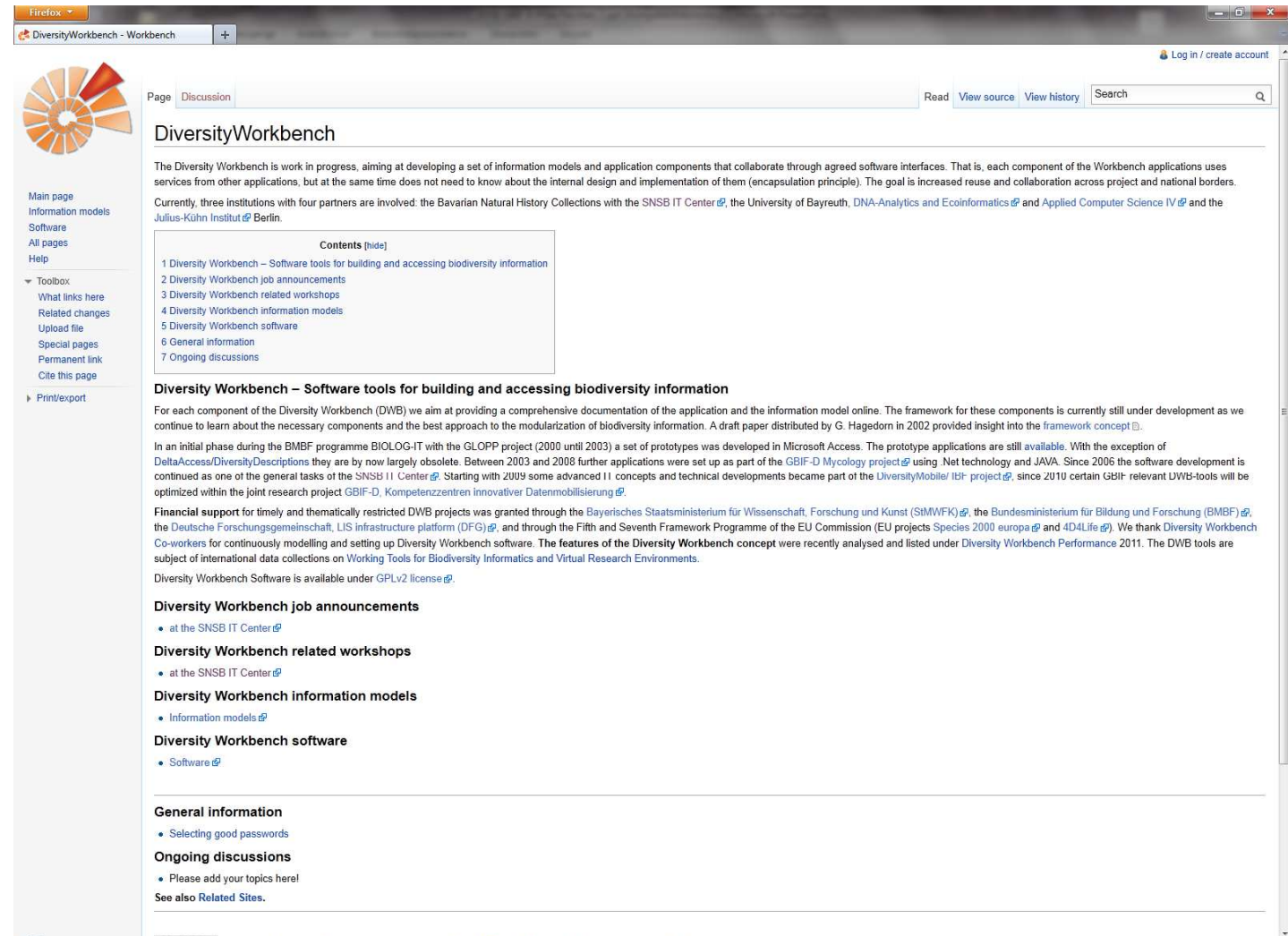


Diversity Workbench – Work in progress

4 Partner

Download
Center

Software unter
GPL Lizenz



Firefox DiversityWorkbench - Workbench Log in / create account

Page Discussion Read View source View history Search

DiversityWorkbench

The Diversity Workbench is work in progress, aiming at developing a set of information models and application components that collaborate through agreed software interfaces. That is, each component of the Workbench applications uses services from other applications, but at the same time does not need to know about the internal design and implementation of them (encapsulation principle). The goal is increased reuse and collaboration across project and national borders.

Currently, three institutions with four partners are involved: the Bavarian Natural History Collections with the SNSB IT Center, the University of Bayreuth, DNA-Analytics and Ecoinformatics and Applied Computer Science IV and the Julius-Kühn Institut Berlin.

Contents (hide)

- 1 Diversity Workbench – Software tools for building and accessing biodiversity information
- 2 Diversity Workbench job announcements
- 3 Diversity Workbench related workshops
- 4 Diversity Workbench information models
- 5 Diversity Workbench software
- 6 General information
- 7 Ongoing discussions

Diversity Workbench – Software tools for building and accessing biodiversity information

For each component of the Diversity Workbench (DWB) we aim at 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 became part of the [DiversityMobile/IT project](#), since 2010 certain GBIF-relevant DWB-tools will be optimized within the joint research project [GBIF-D, Kompetenzzentren innovativer Datenmobilisierung](#).

Financial support for timely and thematically restricted DWB projects was granted through the [Bayerisches Staatsministerium für Wissenschaft, Forschung und Kunst \(StMWFK\)](#), the [Bundesministerium für Bildung und Forschung \(BMBF\)](#), the [Deutsche Forschungsgemeinschaft](#), [LIS infrastructure platform \(DFG\)](#), and through the [Fifth and Seventh Framework Programme of the EU Commission \(EU projects Species 2000 europa and 4D4Life\)](#). We thank Diversity Workbench Co-workers for continuously modelling and setting up Diversity Workbench software. **The features of the Diversity Workbench concept** were recently analysed and listed under [Diversity Workbench Performance 2011](#). The DWB tools are subject of international data collections on [Working Tools for Biodiversity Informatics and Virtual Research Environments](#).

Diversity Workbench Software is available under [GPLv2 license](#).

Diversity Workbench job announcements

- at the [SNSB IT Center](#)

Diversity Workbench related workshops

- at the [SNSB IT Center](#)

Diversity Workbench information models

- [Information models](#)

Diversity Workbench software

- [Software](#)

General information

- [Selecting good passwords](#)

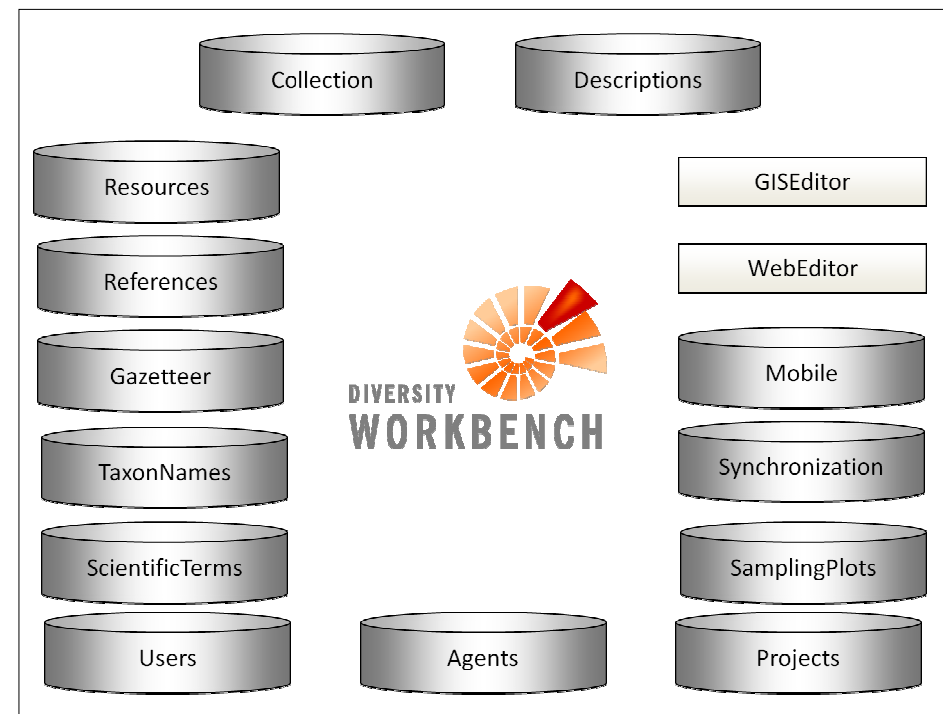
Ongoing discussions

- Please add your topics here!

See also [Related Sites](#).

Diversity Workbench Framework

- Business Solution geeignet für Datenzentren
- Direkte Interoperabilität aller Komponenten
- Virtuelle Forschungsumgebung
- Schwerpunkte für die Disziplinen
 - Taxonomie und Chemotaxonomie
 - Phytosoziologie
 - Molekulare Ökologie und Organismische Interaktionen
 - Ökophysiologie
 - Fernerkundung (p.p.)
- Datensätze aus allen organismischen Großgruppen Pflanzen, Algen, Pilze, Wirbeltiere, Insekten, andere Wirbellose, Fossilien



DiversityWorkbench – Rich Clients

The screenshot displays the DiversityWorkbench interface with several overlapping windows:

- DiversityCollection v.3.0.3.6:** Shows specimen details for *Ceratotherium simum* (Burchell, 1817) with specimen ID 178065 and event 20971. It includes a 'Select the displayed fields' list and a table of specimen records.
- DiversityScientificTerms v.3.0.0.0:** A terminology browser showing a hierarchy for 'Indusium' with various sub-terms like 'Indusium', 'Jura', 'Jurassic', etc.
- DiversityAgents v.3.0.0.3:** Agent information for 'Hertel, Hannes, Prof. Dr.' (ID: 12732), including title, given name, and contact details.
- DiversityTaxonNames, Database: DiversityTaxonNames_Fungi v.3.0.1.5:** Taxonomic details for *Biatora sylvana* Korb. (ID: 1036334), including nomenclature, taxonomic reference, and a list of synonyms.

The specimen table in the DiversityCollection window includes the following data:

Accession number	Collection year	Country	Locality
SAPM-MA-00129		Germany	Deutsche
SAPM-MA-00130	1989	Germany	Deutsche
SAPM-MA-00131	1995	Germany	Deutsche
SAPM-MA-00132	1995	Germany	Deutsche
SAPM-MA-00133		Inde	Inde
SAPM-MA-00134	1989	Inde	Inde
SAPM-MA-00135	1989	Inde	Inde
SAPM-MA-00136	1989	Germany	Deutsche
SAPM-MA-00137		Germany	Deutsche
SAPM-MA-00138		Germany	Deutsche
SAPM-MA-00139		Germany	Deutsche
SAPM-MA-00140		Germany	Deutsche
SAPM-MA-00141	1999	Germany	Deutsche
SAPM-MA-00142	2000	China	China
SAPM-MA-00143		South Africa	Sudafrika
SAPM-MA-00144		South Africa	Sudafrika
SAPM-MA-00145	1989	South Africa	Sudafrika
SAPM-MA-00146		Germany	Deutsche
SAPM-MA-00147	1989	Germany	Deutsche
SAPM-MA-00148	1990	Germany	Deutsche
SAPM-MA-00149	1991	Germany	Deutsche
SAPM-MA-00150	1992	Germany	Deutsche
SAPM-MA-00151	1993	Germany	Deutsche
SAPM-MA-00152	1993	Germany	Deutsche

Browser-embedded Diversity Web Editor

DiversityCollection - Windows Internet Explorer

http://localhost:1775/ABC01TestPage.html

Google

Datei Bearbeiten Ansicht Favoriten Extras ?


Favoriten DiversityCollection

Seite Sicherheit Extras »

Diversity Web Editor

Logout EntryIdentification Save Select table

Server: bsm7.snsb.info:5432 Database: DiversityCollection_Test User: TestEditor



SamplingSite

AK	Accuracy	Altitude	Author	Date	Description	Direction	Distance	GeocodeMethod	Latitude	Location	Longitude	Notes
<input type="checkbox"/>	1	40		2/28/2007 12:00:00 AM						40	40	c.

CollectionEvent

AK	CollectingMethod	CollectorsName	CollectorsNumber	Day	HabitatDescription	Month	Notes	PreparationMethod	Year
<input type="checkbox"/>		Huneck, S.		27		5	methode		1996

CollectionSpecimen

AK	AccessionDate	DepAccNumber	Depositor	ExternalID	Number	Project	Status
<input type="checkbox"/>					M-0041201		

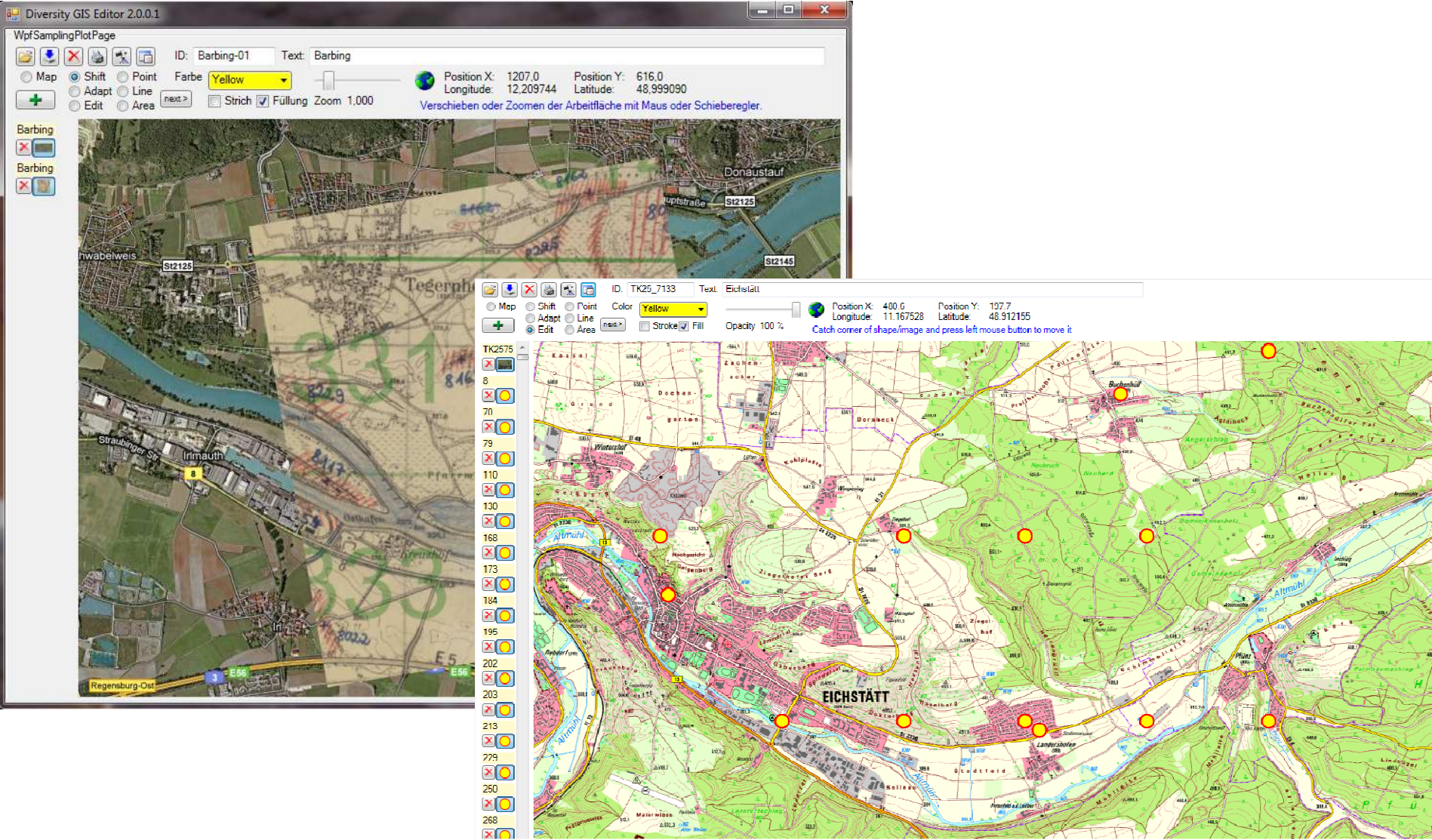
Organism

AK	Gender	LifeStage	Number	Relation	RelationTaxon	RelationType	Remarks	TaxonomicGroup	VoucherNumber
<input type="checkbox"/>								fungus	

Fertig

Internet 100%

Diversity GIS Editor



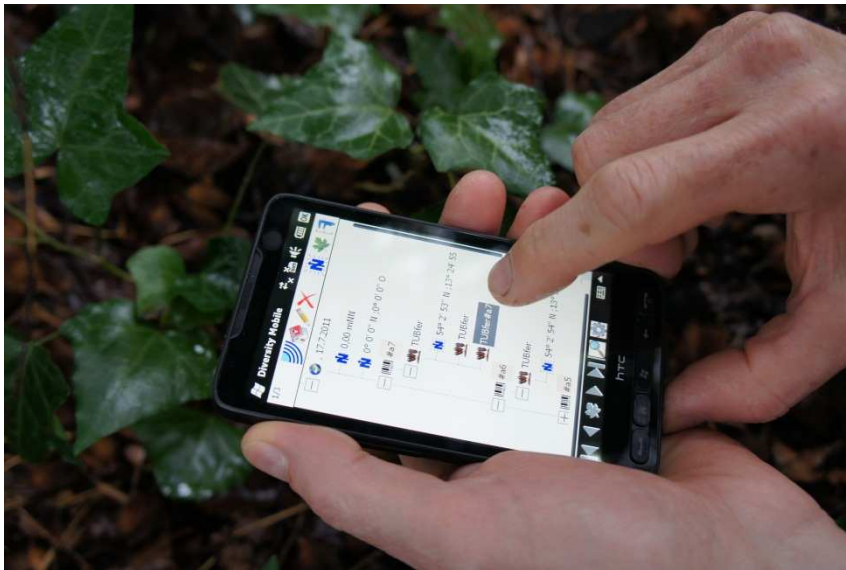
DiversityMobile – www.diversitymobile.net

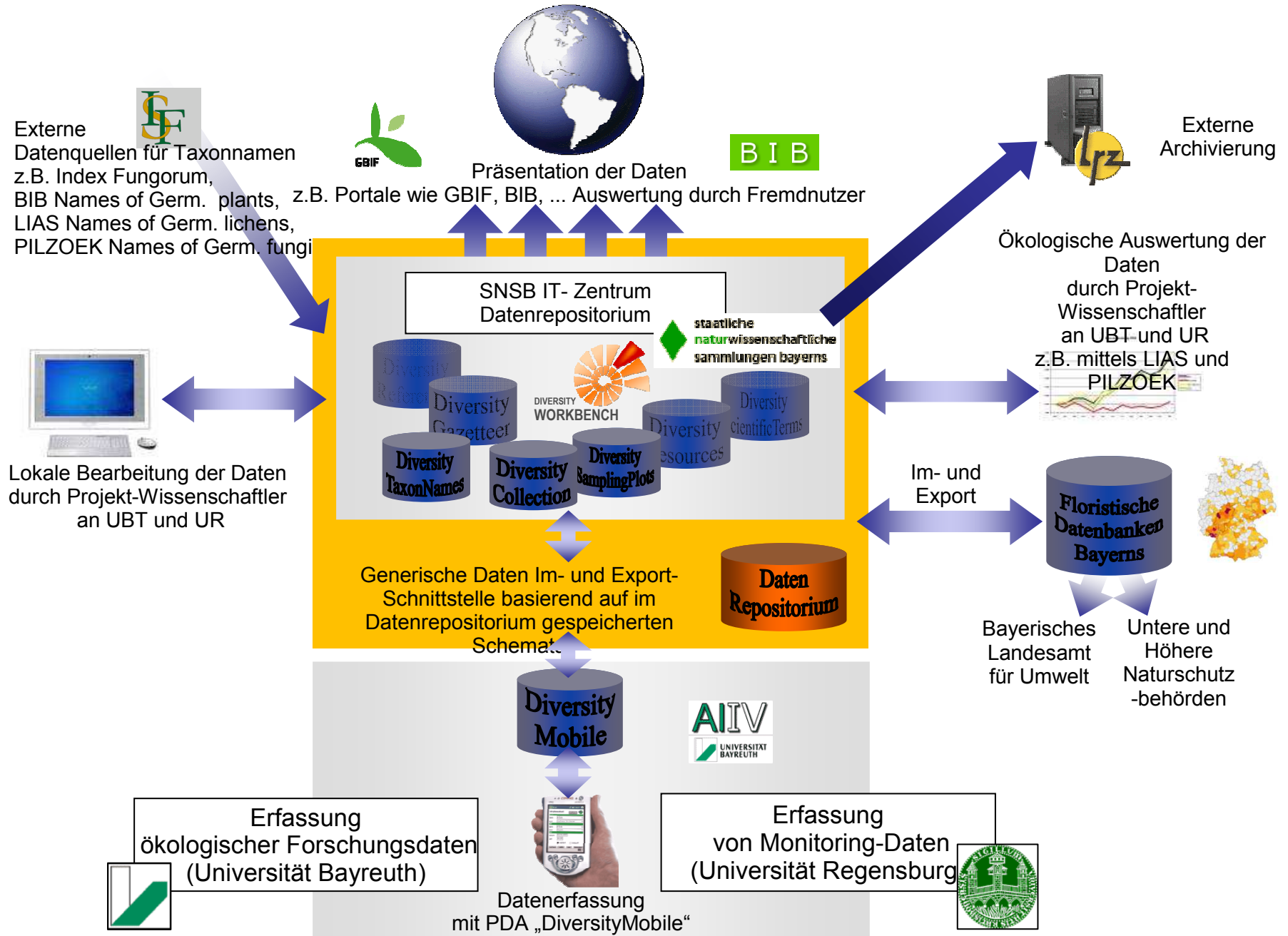
- Erfassung von **raum- und zeitbezogenen Biodiversitätsdaten** in Forschungsprojekten, z. B. Inventory- und Monitoring-Projekten
- Erfassung **ökologischer Beziehungen**, z. B. auf Langzeit-Untersuchungsflächen

Dateneingabe über Smartphones (WindowsPhone) und Tablet PC (Windows 7)

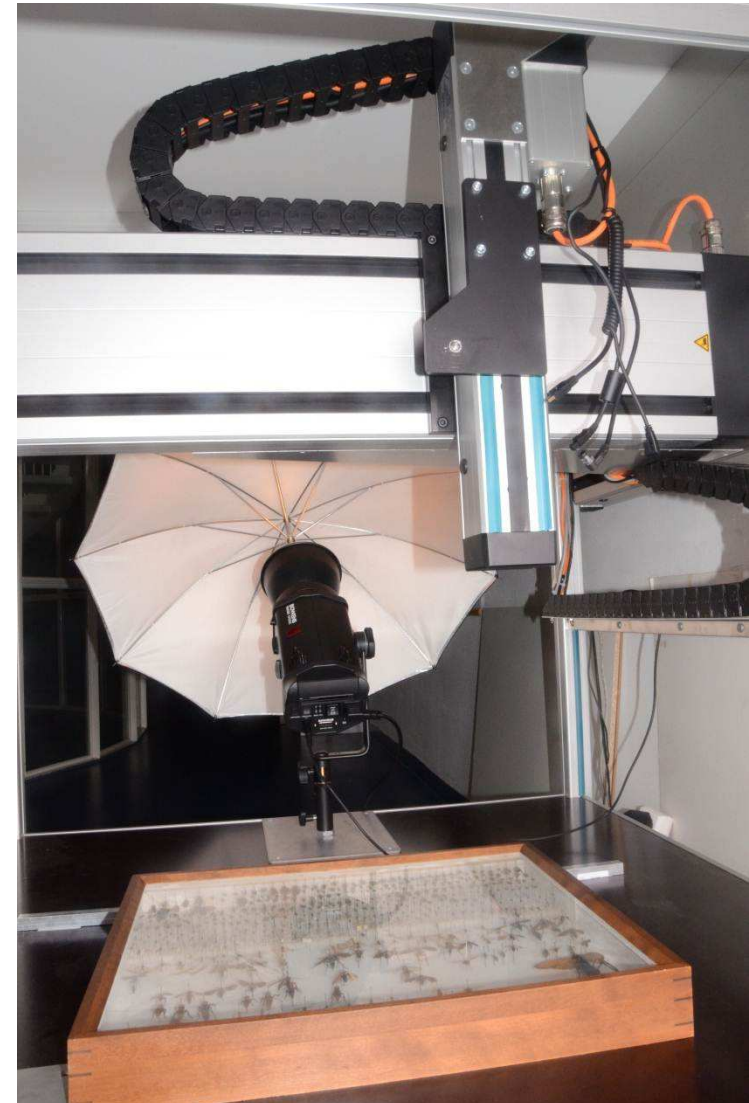
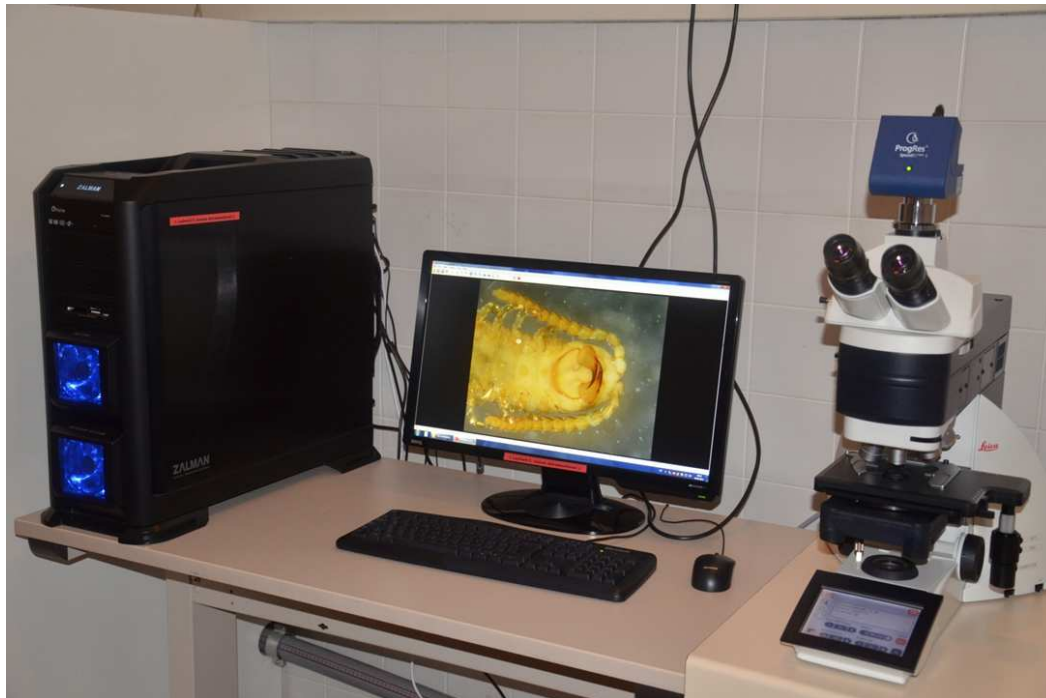


Mobiles Datenmanagement – verschiedene Szenarien

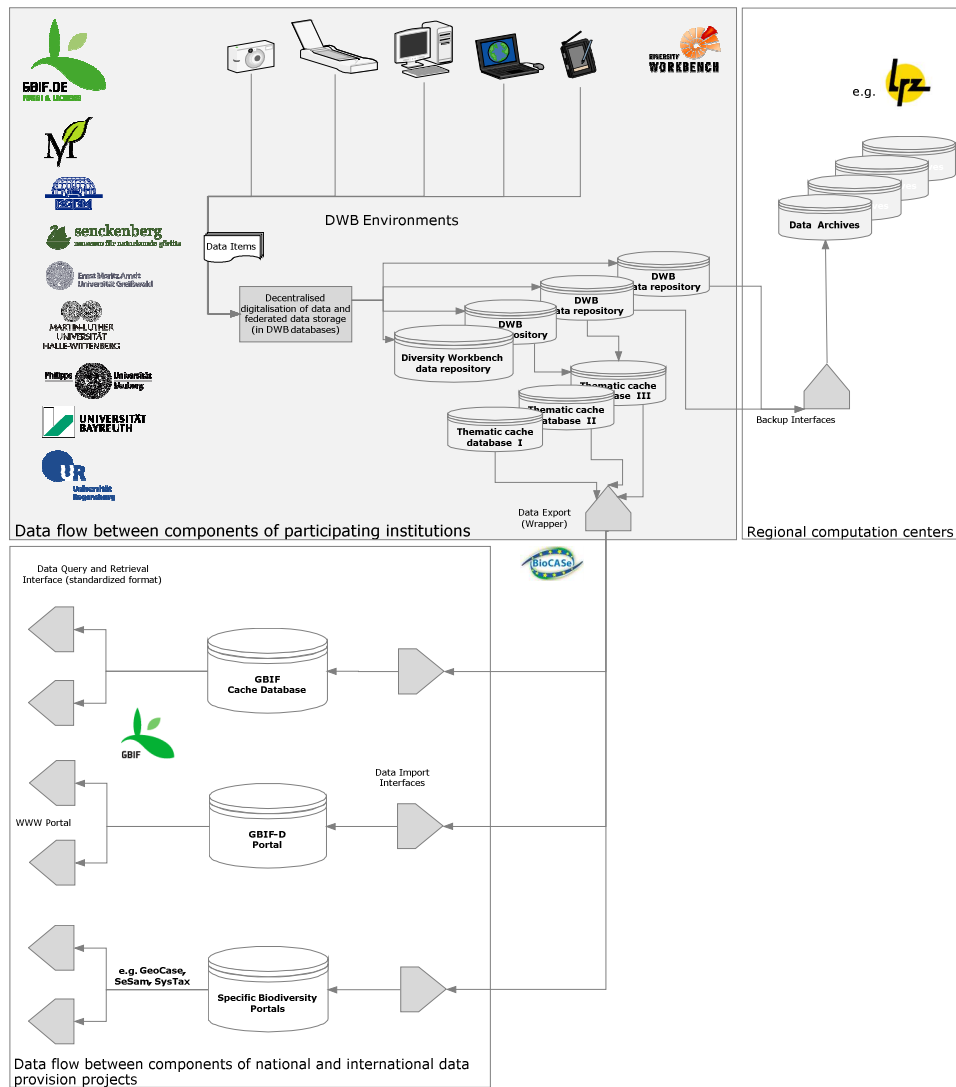




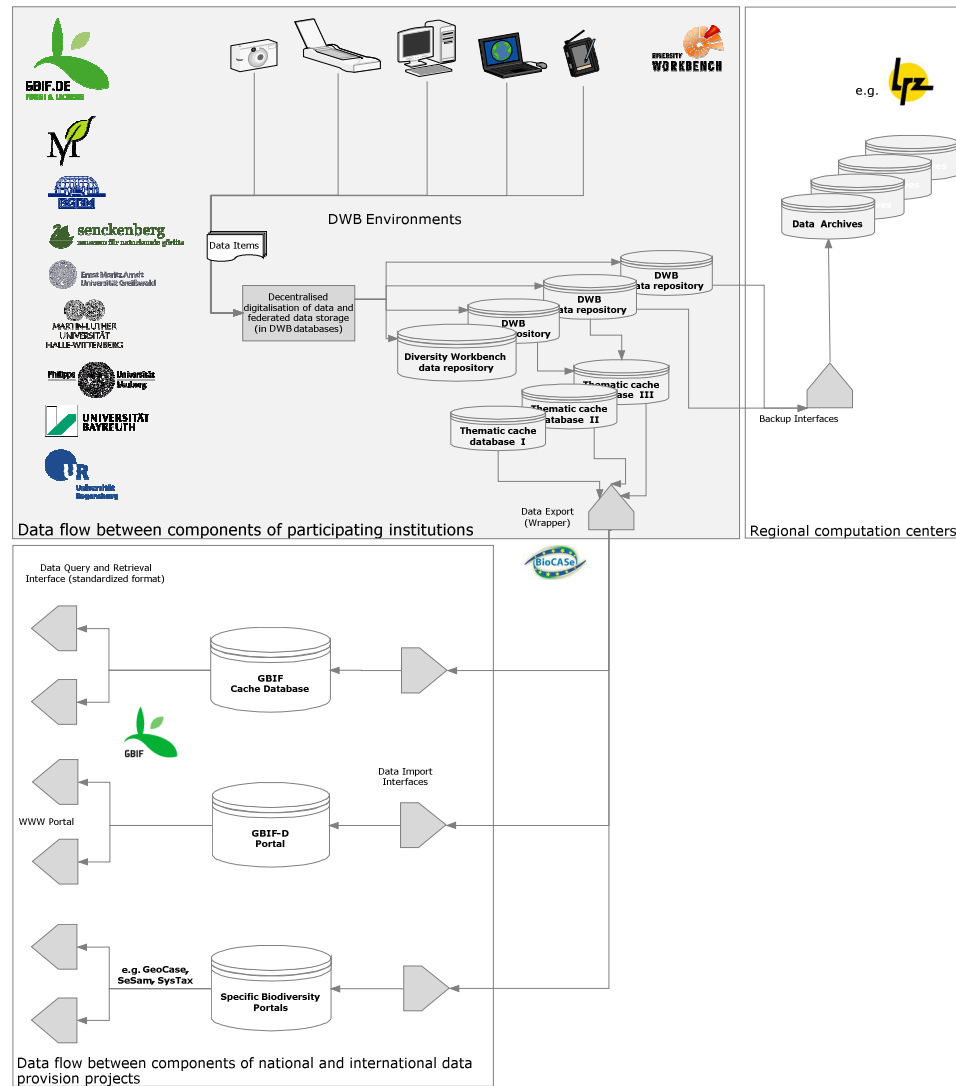
Multimedia-Daten – Generierung



Multimedia-Daten und DWB-Daten – Datenfluss im Repositorium



Multimedia-Daten und DWB-Daten – Datenfluss zu Portalen



DWB-Daten – GBIF Portal

The screenshot displays the GBIF portal interface in a Firefox browser window. The browser tab is titled "Staatliche Naturwissenschaftliche ...". The page header features the GBIF logo and navigation links: "HOME SPECIES COUNTRIES DATASETS OCCURRENCES SETTINGS ABOUT". A search bar is present with the text "search species/country/dataset" and "Start new search". Below the header, the "Data Publisher: Staatliche Naturwissenschaftliche Sammlungen Bayerns" is identified. A section titled "Actions for Staatliche Naturwissenschaftliche Sammlungen Bayerns" includes "Explore: Occurrences" and "Download: Darwin Core records, One-degree cell density overlay for Google Earth, Placemarks for Google Earth (limit 10,000)".

The main content area is titled "Occurrence overview" and features a world map showing the density of biodiversity records. The map uses a color scale to represent the number of records per one-degree cell. A legend on the right side of the map provides the following categories:

Count / one degree cell
1 - 9
10 - 99
100 - 999
1000 - 9999
10000 - 99999
100000+

Below the legend, a small globe icon is shown with a bounding box indicating the current map view: 89 (top), 149 (left), 169 (right), and 79 (bottom). The map shows a high density of records (red and orange) in Europe and North America, with a red box highlighting a specific area in the North Atlantic.

At the bottom of the map, the following text is displayed:

Beta: GBIF Open Geospatial Consortium services
This map only shows records with coordinates (189.683 records from a total of 253.571 records).
Disclaimer: Maps depict density of data registered within the GBIF network index and not necessarily true species occurrence density gradients. It includes records from all datasets shared by this data publisher.

DWB-Daten – Biological Collection Access Services for Europe

The screenshot displays the BioCASE Europe Portal website in a Firefox browser window. The page features a search interface with a dropdown menu for 'Ceratotherium' and a detailed view of a specimen unit.

Search for ...
Taxon name: Ceratotherium
Ceratotherium simum (4)
Ceratotherium simum (1)

Details
Units details
Ceratotherium simum (Burchell, 1817) Source Institution: SAPM
Unit ID: SAPM-MA-00136 / 211061 / 153754 Collection: SAPMmammaliacoll
Unit GUID: http://id.snsb.info/Collection/178065-211061-153754
Kind of Unit: PreservedSpecimen

Identification(s)
Name: Ceratotherium simum (Burchell, 1817)

Multimedia

DWB-Daten – Geosciences Collection Access Service for Europe

The image shows two browser windows. The left window displays the main GeoCASE website, which includes a navigation menu (Home, Data Access, Join the Network, Tutorial, About the Project) and introductory text about the ABCDEFG service. The right window shows the 'Simple ABCDEFG provider access portal', which features a search form with various criteria and a 'Search' button.

GeoCASE Website Content:

March 2011 - The Natural History Museum Vienna has joined the GeoCASE network

Geosciences Collection Access Service

Home | Data Access | Join the Network | Tutorial | About the Project | About

ABCDEFG (Access to Biological Collection Databases Extended for Geosciences) is an > developed for use with palaeontological, mineralogical and geological digitalized collection data. It extends the ABCD-XML-Schema (Access to Biological Collection Databases) used by GBIF (Glo...)

The ABCDEFG-XML-Schema is used to apply a mapping to the local data source and it is supp Software is easy to install and provides a very handy user interface for database description a mediates between the local data source and the GeoCASE Portal by sending and receiving XML...

ABCDEFG is proposed to the organisation of biodiversity information standards TDWG (Taxo standard for geoscientific collections. GeoCase will be adopted by GBIF as soon as possible. The schema provides a general geoscientific collections. It does not replace an individual database management software.

The BioCASE Provider Software may be obtained from http://biocase.org/products/provider_snfw

For further information on ABCD visit <http://wiki.tdwg.org/ABCD/>.

For further information on the EFG Extension download the [ABCDEFG-XML-Schema document /efg_schema.pdf](#) or use the following documentation on this website.

ABCDEFG Schema Documentation:

Schema **abcdefg.xsd**

schema location: <http://www.geocase.eu/documentation/abcdefg.xsd>
targetNamespace: <http://www.synthesys.info/ABCDEFG1.0>

Elements

AnalysisDateTime	Complex types
AnalysisReferences	AllocthonousMaterialType
Certainty	AlterationType
DatingQualifier	AnalysisAtomisedType
IdentificationAnalysis	AssociatedFossilAssemblageType
NamedGeologicalFeature	AssociatedMineralAssemblageType
StratigraphicMeasurementsOrFacts	BiostratigraphicAttributionsType
	ChronostratigraphicAttributionsType
	EarthScienceSpecimenType
	IdentificationAnalysisType
	IdentifiersType
	IsotopeStratigraphicDeterminationsType
	LithostratigraphicAttributionsType
	MagnetostratigraphicDeterminationsType
	MineralogicalUnitType
	MineralRockIdentifiedType
	PalaeontologicalUnitType
	RadiometricDatesType
	RockUnitType

Simple ABCDEFG provider access portal

Important Note:
This is a simple data portal for the [GeoCASE network](#). It uses [BioCASE](#) technology to perform a distributed query on ABCDEFG providers, using the BioCASE protocol. Since searches are performed on the original provider's databases, they might take some time and yield less results than expected, if some of the providers are offline.

★ Query ABCDEFG Data Providers:
First, choose the type of database you want to query, you can search for either paleontological or mineralogical data. Then enter your search criteria, using * as a wildcard. Please note that not all data has yet been translated into English for this prototype version. If you would like to receive the full response in xml format, please supply a valid email address.

Fossils Minerals & Rocks

Scientific name or a part of it (e.g. Archegosaurus*)	<input type="text"/>
Higher taxon name (e.g. Amphibia)	<input type="text"/>
Chronostratigraphic attribution (e.g. Permian)	<input type="text"/>
Country name (e.g. Germany)	<input type="text"/>
Named Area (e.g. Saarland)	<input type="text"/>
Locality (e.g. *Saalfeld*)	<input type="text"/>
Enter your email address for a full result response email:	<input type="text"/>
Limit max. number of results per database to	<input type="text" value="10"/>
Wait for not more than	<input type="text" value="15"/> sec. for a database to respond (consider raising this timeout level if you get insufficient results).
<input type="button" value="Search"/>	

Powered by:

© 2005-2009 Freie Universität Berlin, Botanischer Garten und Botanisches Museum Berlin-Dahlem
Seitenverantwortliche/Page editors: J. Holetschek, A. Hahn, M. Döring, C. Dancea, A. Güntsch
BGBM Impressum/Imprint; Haftungsausschluss/Disclaimer

DWB-Daten – SysTax-Portal

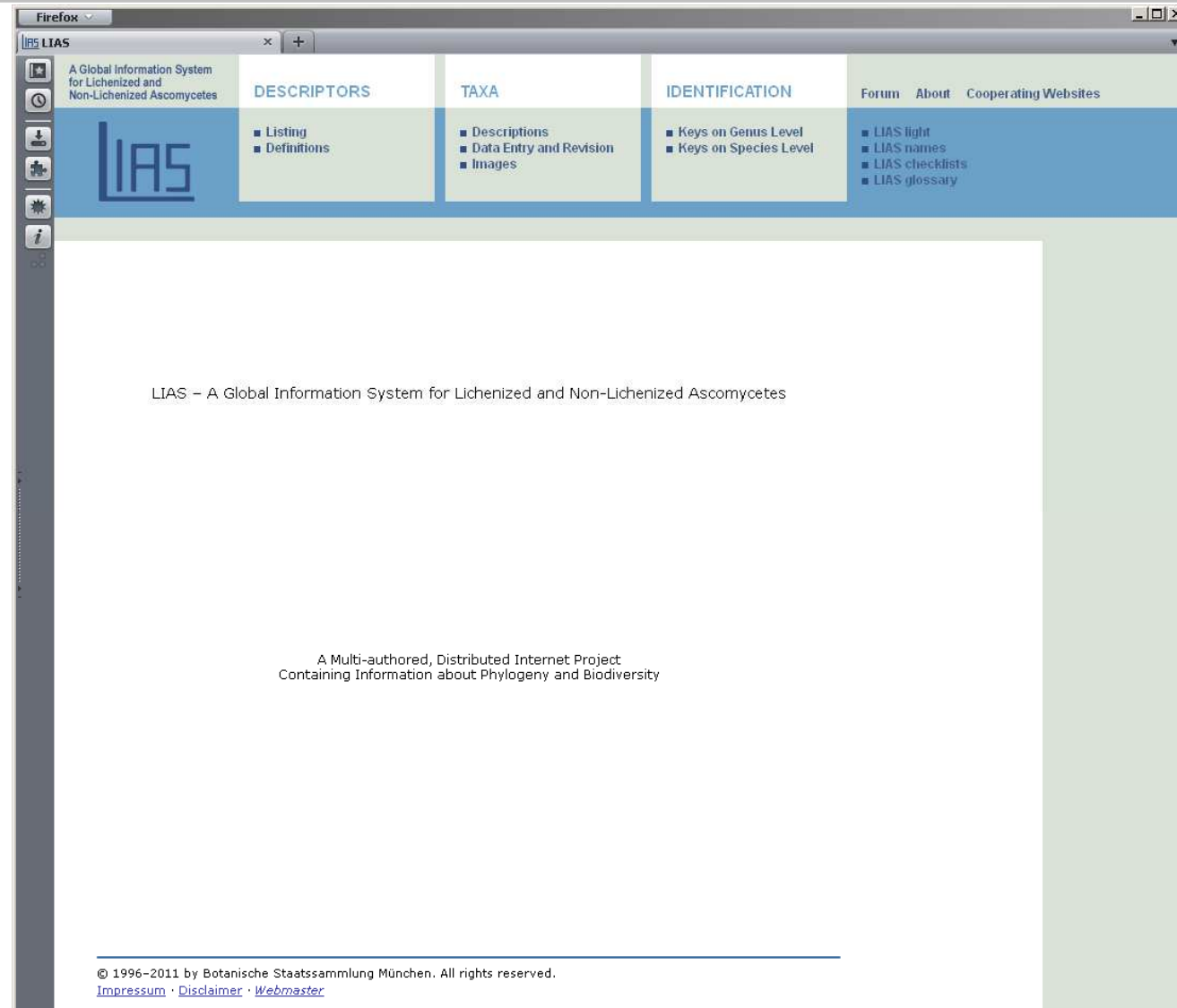
The screenshot shows a Firefox browser window displaying the SysTax-Portal website. The browser's address bar shows the URL "Wirbellose II Systax Abfrage | Gbi...". The website has a green and white color scheme. At the top left is the GBIF.DE logo. The main navigation menu on the left includes sections for "Wirbellose II", "Deutschland", and "International". The central content area is titled "Home" and "Wirbellose II Systax Abfrage", with a search form below it. The search form includes a search bar, a "search" button, and a "help" button. Below the search bar are several filter options: "data source" (all data sources), "restriction" (zool. collections only), "types only", "with images only", "with sound only", "sort order" (taxon, institute), and "display" (short). The right sidebar contains a "Search" section, a news item titled "BMBF stärkt deutschen Beitrag zur Global Biodiversity Information Facility (GBIF)", and a "User login" section. The footer of the page includes the copyright notice "© SysTax - Universität Ulm & Ruhr-Universität Bochum; script last modified: 16.09.2009" and the SysTax logo.

DWB-Daten in LIAS

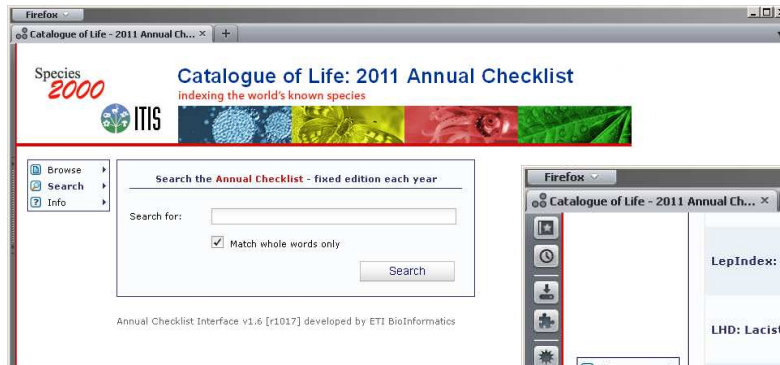
LIAS, ein
Informationssystem für
deskriptive und
taxonomische
Daten

seit 1996 online

seit 2001
Daten in DWB-
Komponenten



DWB-Daten in Catalogue of Life



LepIndex: The Global Lepidoptera Names Index		Butterflies and moths	243,006
LHD: Lacistemataceae Holistic Database		Waits Nuni plant family	28
LIAS: A Global Information System for Lichenized and Non-Lichenized Ascomycetes NEW!		Lichens	5,499
MantodeaSF: Mantodea Species File		Praying mantids	2,403
MBB: Moss Bug Base		Moss bugs	32
Mites GSDs: OlogamasidBase		Ologamasid mites	446
Mites GSDs: PhytoseiidBase		Phytoseiid mites	2,186
Mites GSDs: RhodacaridBase		Rhodacarid mites	145
Mites GSDs: TenuipalpidBase		Tenuipalpid mites	887
MOST: Moss TROPICOS Database		Mosses	13,365
MOWD: Membracoidea of the World Database NEW!		Treehoppers and leafhoppers	15,392
Nomen.eumycetozoa.com		Slime moulds	1,034

Dienstleistungen für GBIF Deutschland

GBIF-DE

Home

Global Biodiversity Information Facility - Deutschland

English Version

Die internationale Initiative **Global Biodiversity Information Facility (GBIF)** hat sich zum Ziel gesetzt, wissenschaftliche Daten und Informationen zur weltweiten Artenvielfalt in digitaler Form über das Internet frei und dauerhaft verfügbar zu machen.

Ziele und Beteiligte von GBIF-D

Deutschland gehört zu den Gründungsmitgliedern der Global Biodiversity Information Facility (GBIF). Seit Ende 2010 arbeitet **GBIF-Deutschland (GBIF-D)** im Rahmen eines BMBF-finanzierten Verbundvorhabens an der gezielten Zusammenstellung und Mobilisierung aller bundesweit geeigneten Sammlungs-, Forschungs-, Beleg- und Observationsdaten zur Umsetzung des GBIF-Leitbildes ([pdf](#)). Als Verbundpartner sind insgesamt **acht GBIF-Knoten an deutschen Forschungsanstalten** aktiv:

- BGBM Berlin-Dahlem für das Teilprojekt **Koordination**
- DSMZ Braunschweig für das Teilprojekt **Bakterien & Archaeen**
- BGBM Berlin-Dahlem für das Teilprojekt **Pflanzen, Algen & Protisten**
- BSM München für das Teilprojekt **Pilze & Flechten**
- MfN Berlin für das Teilprojekt **Insekten**
- ZSM München für das Teilprojekt **Wirbellose II**
- Senckenberg Frankfurt für das Teilprojekt **Wirbellose III**
- ZFMK Bonn für das Teilprojekt **Wirbeltiere**
- MfN Berlin für das Teilprojekt **Fossilien**

Sprecher GBIF-D: Walter Berendsohn (Wiederwahl 2009)
Stellvertretende Sprecherin GBIF-D: Dagmar Triebel (seit 2009)
Sprecher der IT-Kommission: Anton Güntsch

Weitere fachliche und technische Begriffe im Zusammenhang mit der GBIF-Arbeit finden Sie im [Glossar](#). Informationen für Pressevertreter sind [hier](#) hinterlegt.

Search

Search this site:

BMBF stärkt deutschen Beitrag zur Global Biodiversity Information Facility (GBIF)

SPONSORED BY THE
Federal Ministry of Education and Research

Die Global Biodiversity Information Facility (GBIF) hat sich als weltweit führende Informationsinfrastruktur für den Bereich der organismischen Vielfalt etabliert und bewährt (<http://data.gbif.org>).

Deutschland ist eines der Gründungsmitglieder von GBIF und seit Jahren einer der größten Biodiversitätsdatenanbieter weltweit.

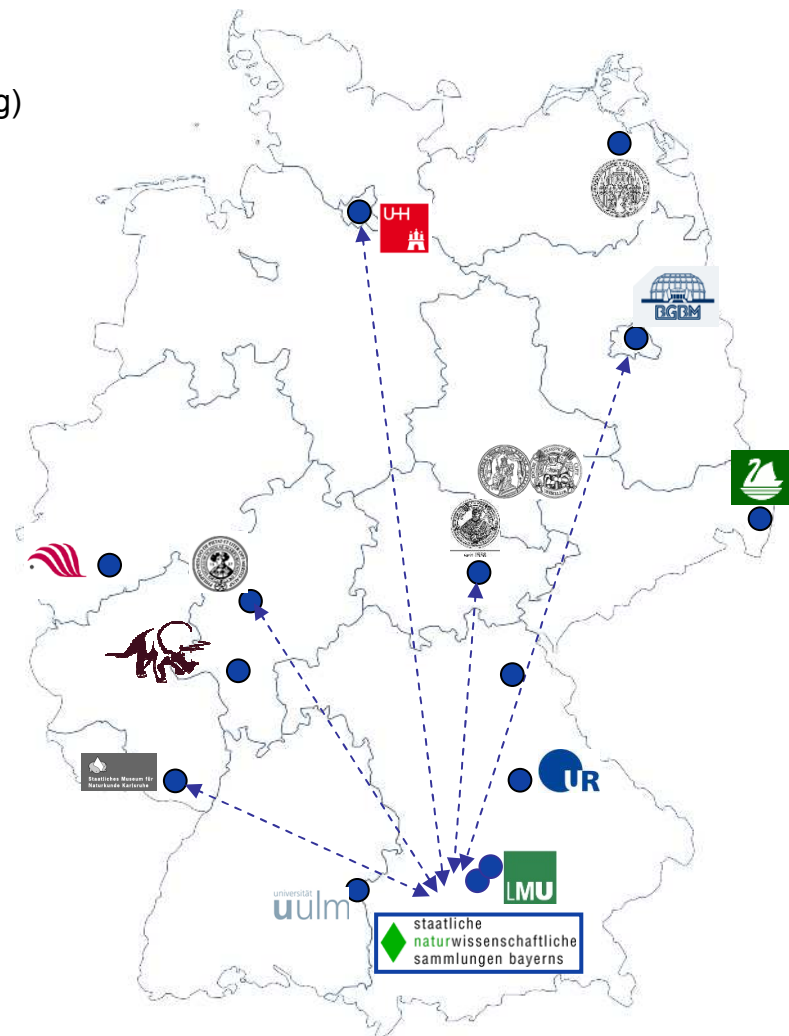
GBIF-Publikationen demnächst im „GBIF Online Resource Centre“ zusammengefasst.

GBIF

Entsprechend dem aktuellen GBIF-Arbeitsprogramm laufen

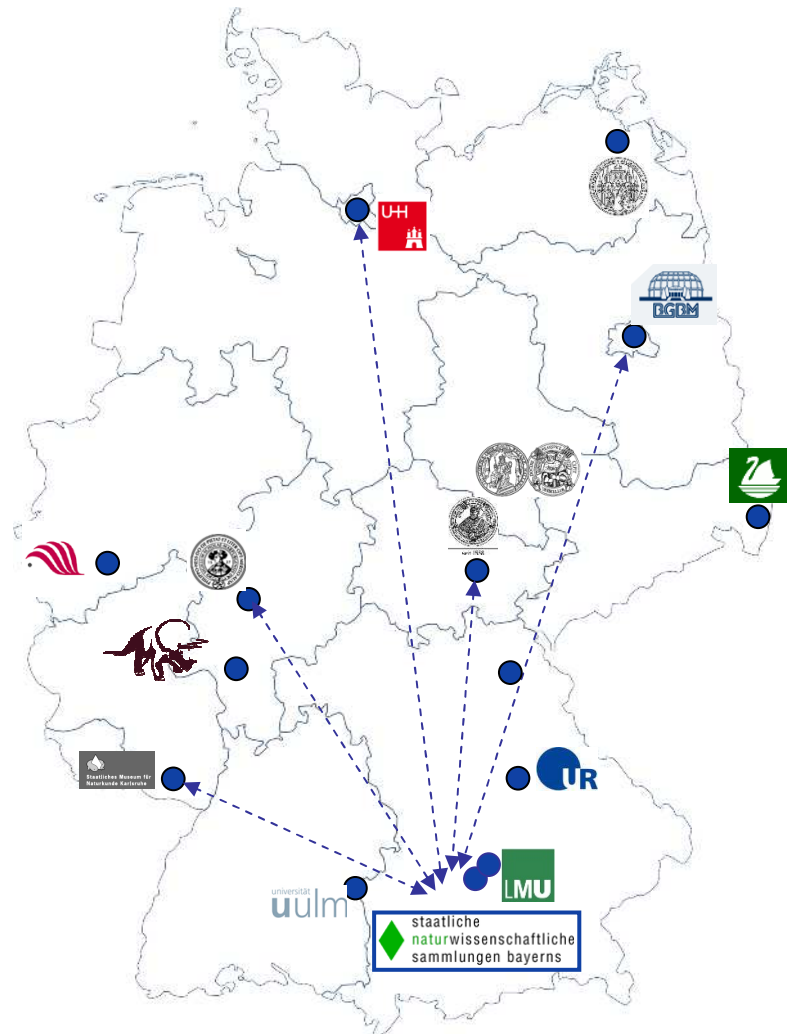
Nationale Kooperationen

- Datenaufnahme (via DWB-VRE-Clients; aktuell ca. 120 Remote Clients)
 - Senckenberg Museum für Naturkunde Görlitz (Sammlung)
 - Universität Bayreuth (Lehre, Forschung)
 - Universität Greifswald (Forschung)
 - Universität Halle-Wittenberg (Sammlung)
 - Universität Hamburg (Forschung)
 - Universität Marburg (Sammlung)
 - Universität München LMU (Lehre, Forschung)
 - Universität Regensburg (Bayernflora-Datenbank)
 - u. a.
- Datenbereitstellung, -publikation (Anbindung Datennetzwerke Deutschland)
 - BIB Bayern Portal
 - SeSam Portal (vereinbart)
 - SysTax Portal (im Rahmen GBIF-D vereinbart)
 - GBIF-Deutschland Portal (im Rahmen GBIF-D vorgesehen)



Nationale Kooperationen

- Datentransfer (Aufnahme von Komplettbeständen, Datenrettung)
 - Staatliches Museum für Naturkunde Karlsruhe (Biota-Applikation)
 - Universität Greifswald (MyxDB)
 - Universität Tübingen (TUB-Bilddatenbank)
 - Universität Ulm (SysTax)
 - Zoologisches Forschungsmuseum Alexander Koenig Bonn (BIODAT)
 - u. a.
- Aufbau eigener DWB-Umgebungen
 - Staatliches Museum für Naturkunde Karlsruhe
 - Zoologisches Forschungsmuseum Alexander Koenig Bonn
 - Universität Bayreuth
 - u. a.



SNSB IT-Zentrum – Web-Präsenz

- Informationsportale 14
- Standard-Thesauri online 3
- Online Datenprojekte 30–35
- BioCase-Wrapper, publ. Daten >250.000
- Digitalisate >500.000
- Remote Zugänge (VRE) 120
- GBIF-D Knoten 3

contact impressum disclaimer webmaster

snsb it center

HOME ABOUT US PEOPLE SERVICES WORKSHOPS

Services and Products

Beside data curation tasks as mentioned under [Home](#) and [About us](#) the SNSB IT Center is running services and products in the thematic areas below.

- ▶ **Software Design and Implementation**
 - DIVERSITY WORKBENCH
 - DIVERSITY MOBILE
 - MOBILE
- ▶ **Development of Web Portals for Collections**
 - M
 - GBIF DE FUNGI & LICHERN
 - STAATSSAMMLUNG FÜR ANTHROPOLOGIE UND DALADANATOMIE MUC. **SAPM**
- ▶ **Species Information Systems**
 - DEEMY
 - LIAS
 - MELNET
 - Myxomycota Germany
- ▶ **Portals with General Biodiversity Information**
 - THE MYCOLOGY .NET
 - MYCO PHYLOGENY
 - THE PHYCOLOGY .NET
- ▶ **Literature Catalogues and Bibliographies**
 - DALI
 - IndExs
 - Index Maps
 - MyxLit
- ▶ **Services for Internet Platforms**
 - Catalogue of Life
 - GBIF
 - IAL
 - STOR

staatliche naturwissenschaftliche sammlungen bayerns

Diversity Workbench – Workshop heute



Infos unter

<http://www.snsb.info> → dort Link zu „IT Workshops“