

# Diversity Workbench und DiversityCollection

Systemdesign, Projekte, Datenflüsse, Netzwerke und Dienste

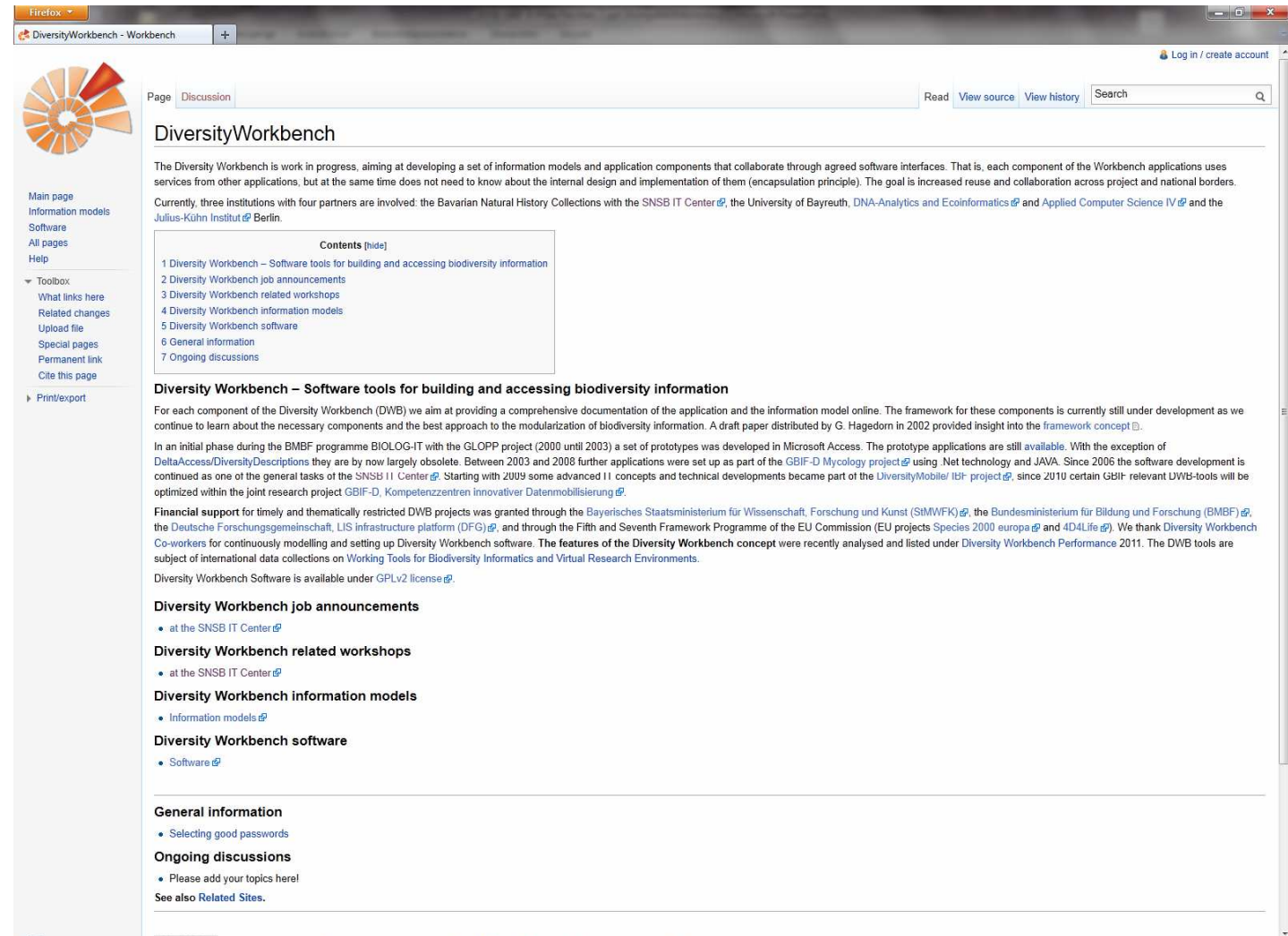
# Diversity Workbench since 1999

Initiative seit  
1999

4 Partner

Download  
Center

Software unter  
GPL Lizenz



The screenshot shows a Firefox browser window displaying the DiversityWorkbench website. The browser title is "DiversityWorkbench - Workbench". The website has a navigation menu on the left with options like "Main page", "Information models", "Software", "All pages", and "Help". The main content area features a "Discussion" tab, a search bar, and a "Contents" section with a list of 7 items. The first item is "Diversity Workbench – Software tools for building and accessing biodiversity information", which is expanded to show a detailed description of the project, its funding, and contact information. The text describes the project's goals, its history, and the institutions involved, including the SNSB IT Center, the University of Bayreuth, and the Julius-Kühn Institut Berlin.

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/ITF 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](#).



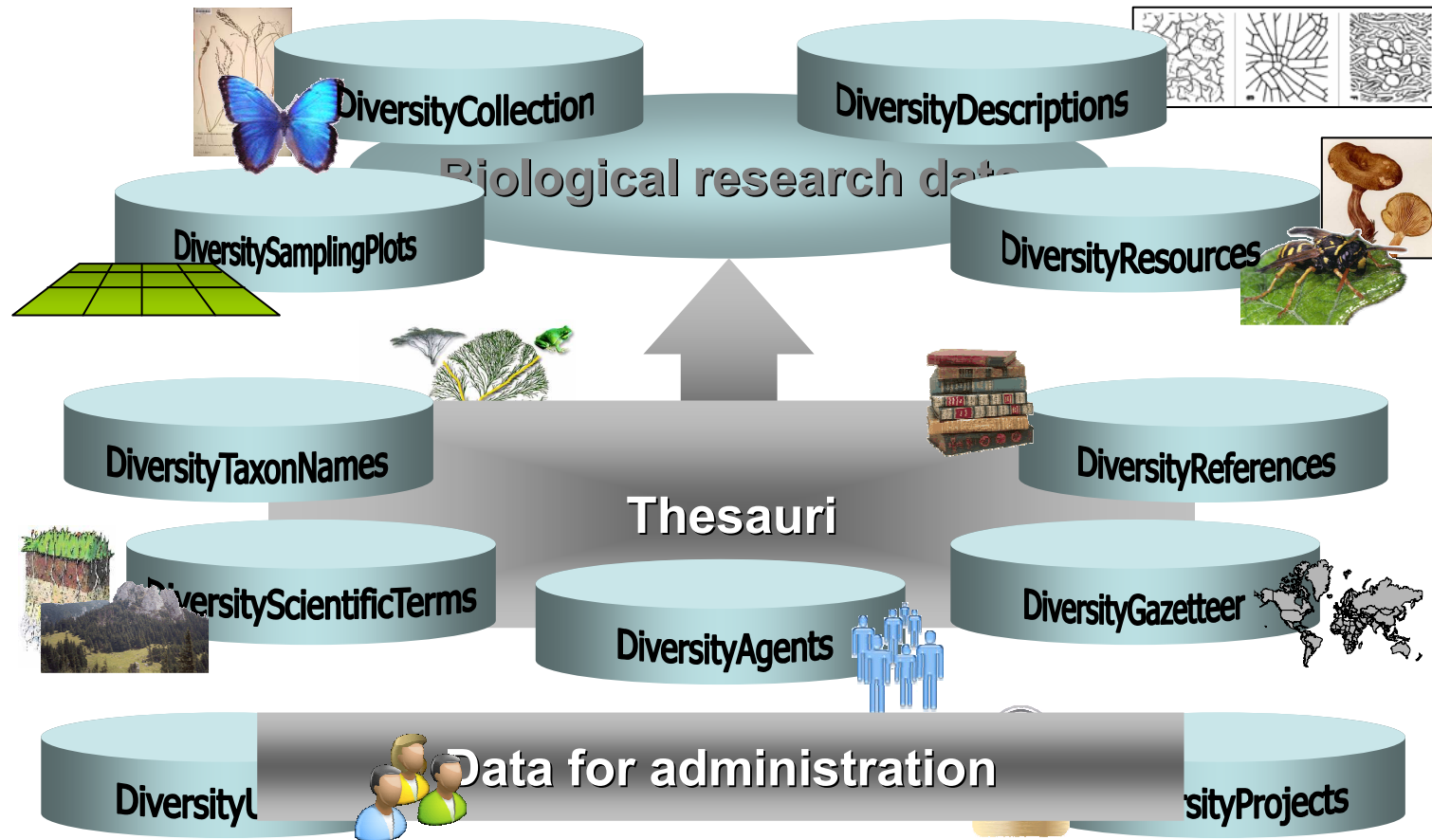
# SNSB – Datenbank-Modellierung, Client-Programmierung



Datenmanagement über relationale Datenbanken mit Rich-Clients:  
Unmittelbarer Mehrwert für Datenproduzenten und -manager

- Langfristige, projektunabhängige Datenprozessierung hochstrukturierter Daten
- Integrierte Datensicherung/ -archivierung
- Integrierte Versionierung und Verwaltung der Daten-Historie
- Flexible Mechanismen der Qualitätssicherung, Suchalgorithmen
- Generierung von XML-Ontologien, integrierte Upload- und Download-Funktionen
- Einfache Integration generischer Dienste (Standard-Thesauri, Gazetteers, GIS)
- Lösungen mit Remote oder Virtuellen Servern

# Diversity Workbench – Datendomänen





# DiversityCollection – Dateneingabe

Collection event - spreadsheet mode

Event.No. Taxonomic name Event Version

ID: 220141 2

**DiversityCollection v. 3.0.1.5**


Acc.No. **SAPM-MA-00136** Ceratotherium simum (Burchell, 1817) Specimen Event Version

IDs: **178065** 208971 3 3

Select the displayed fields

- Collection event
- Collection date
- Localisation of the collection event
- Property of the collector site
- Collection specimen
- Depositor
- Label
- Collector
- Organism
- Second organism
- Part of a specimen
- Transactions of the specimen

Specimen images



Type: photograph

With:

Notes:

Country Locality description

Accession number	Country	Locality description	Taxonomic name	Material category	Storage location
SAPM-MA-00130	Germany	Deutschland [Tiergarten]	Ursus arctos Linnaeus, 1758	complete skeleton	Ursus arctos 11
SAPM-MA-00131	Germany	Deutschland, Bayerischer Wald, Nationalpark Bayerischer Wald	Ursus arctos Linnaeus, 1758	complete skeleton	Ursus arctos 12
SAPM-MA-00132	Germany	Deutschland [Tiergarten]	Ursus arctos syriacus Hemprich and Ehrenberg, 1828	complete skeleton	Ursus arctos 13
SAPM-MA-00133	Germany	Deutschland [Tiergarten]	Hyaena brunnea Thunberg, 1820	complete skeleton	Parahyaena brunnea 1
SAPM-MA-00134	Iraq	Irak, Isin (Isan-Bahriyat), Grabungshaus	Eptesicus nasutus (Dobson, 1877)	complete skeleton	Eptesicus nasutus 1
SAPM-MA-00135	Iraq	Irak, Isin (Isan-Bahriyat), Grabungshaus	Eptesicus nasutus (Dobson, 1877)	complete skeleton	Eptesicus nasutus 2
SAPM-MA-00136	Germany	Deutschland [Tiergarten]	Ceratotherium simum (Burchell, 1817)	complete skeleton	Ceratotherium simum 1
SAPM-MA-00137	Germany	Deutschland [Tiergarten]	Tremarctos ornatus (F. G. Cuvier, 1825)	complete skeleton	Tremarctos ornatus 1
SAPM-MA-00138	Germany	Deutschland [Tiergarten]	Tremarctos ornatus (F. G. Cuvier, 1825)	complete skeleton	Tremarctos ornatus 2
SAPM-MA-00139	Germany	Deutschland [Tiergarten]	Tremarctos ornatus (F. G. Cuvier, 1825)	complete skeleton	Tremarctos ornatus 3

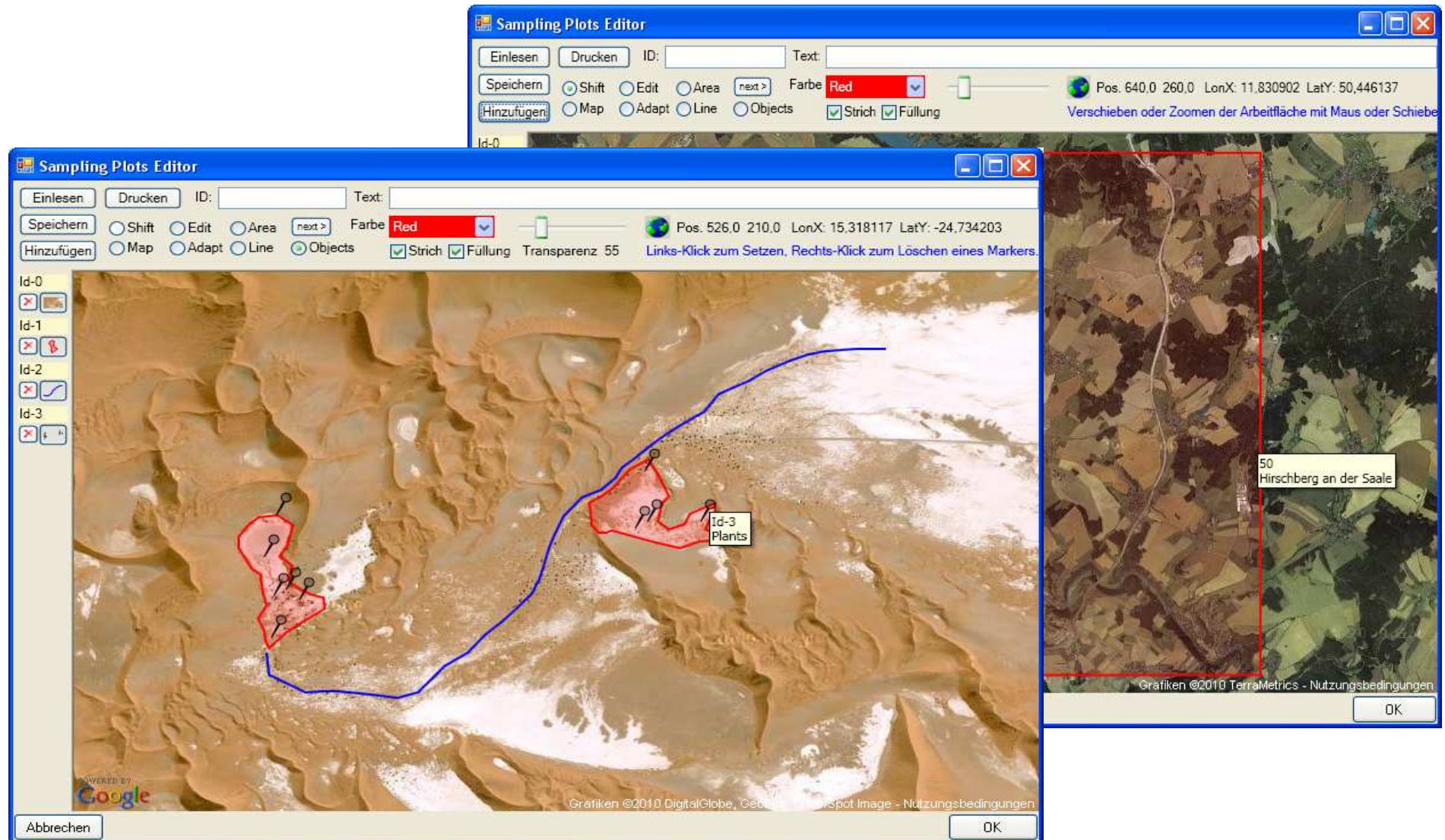
Cancel OK

# DiversityTaxonNames – Dateneingabe

The screenshot shows a Mac OS X desktop with a virtual Windows 7 environment. The main application window is titled "DiversityTaxonNames, Database: DiversityTaxonNames\_Plants v. 3.0.0.3". It displays taxonomic data for *Acinodendron lindenii* (Naudin) Kuntze. The interface includes a menu bar (Connection, Query, Lists, References, Data, Help), a search bar, and various data entry fields. The taxonomic name section shows "Acinodendron lindenii" with author "Naudin" and comb. auth. "Kuntze". The nomenclature section shows "Code:" and "Status:". The taxonomic reference section shows "Revis. Gen. Pl." with a table of references. The synonymy section shows "Name is a homotypic synonym" with a list of synonyms. A system information window is open in the foreground, displaying "Mac OS X Version 10.6.3" and hardware specifications: "Prozessor 2.66 GHz Intel Core i7", "Speicher 4 GB 1067 MHz DDR3", and "Startvolumen Macintosh HD".



# DiversitySamplingPlots und GIS Editor



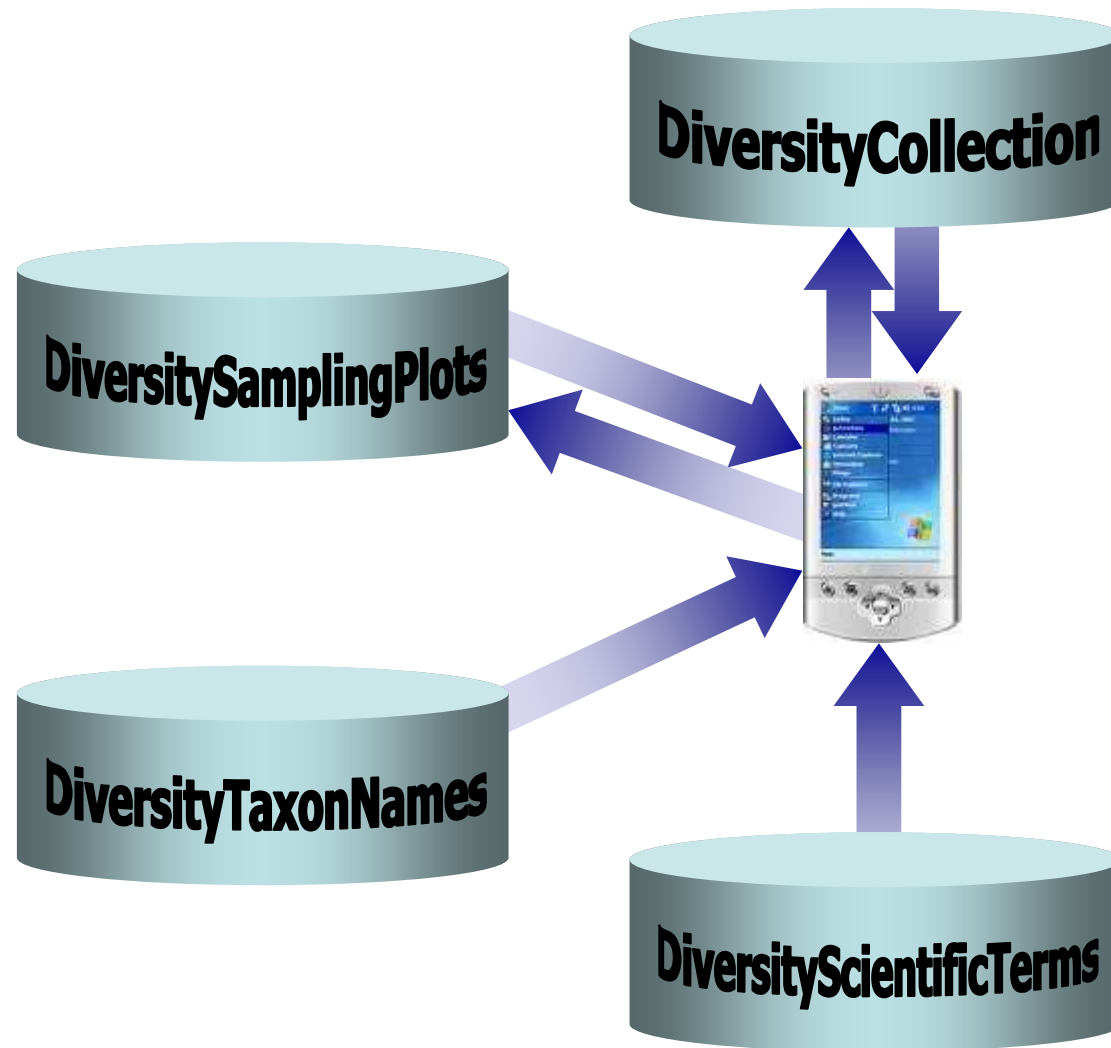


# DiversityMobile – [www.diversitymobile.net](http://www.diversitymobile.net)

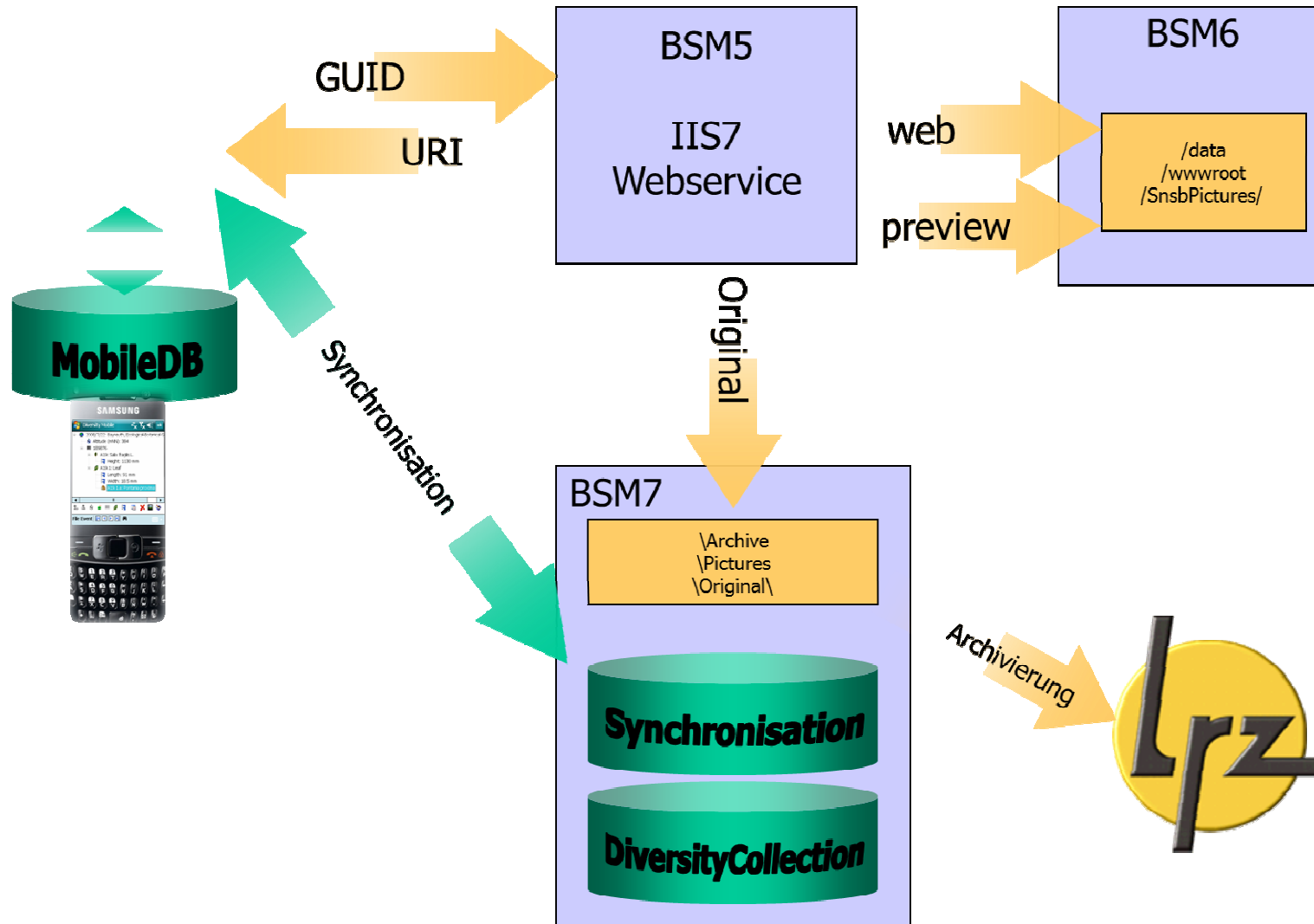
- Erfassung von **raum- und zeitbezogenen Biodiversitätsdaten** in Forschungsprojekten, z. B. Inventory- und Monitoring-Projekten
- Erfassung **ökologischer Beziehungen**, z. B. auf Langzeit-Untersuchungsflächen
  - Dateneingabe über Smartphones (WindowsMobile ab Ver. 5.0) und TabletPCs



# Bidirektionale Datensynchronisation

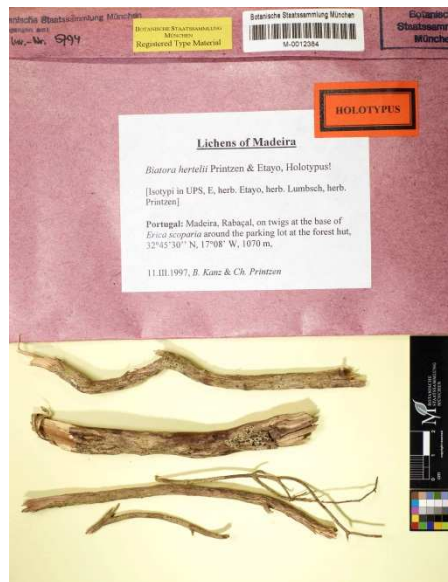
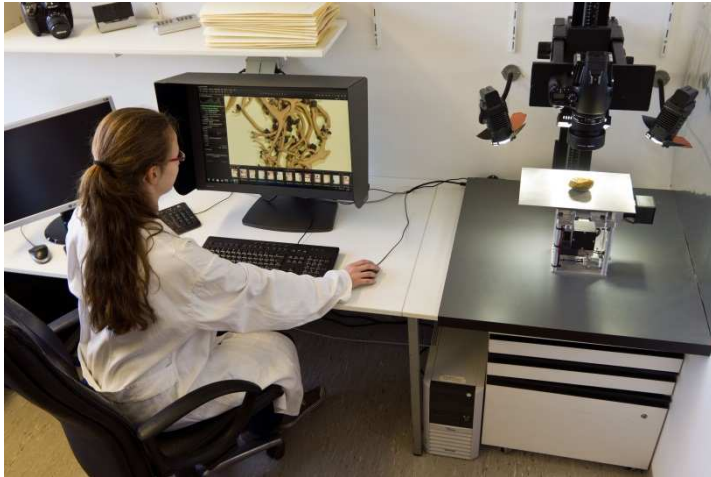


# Datenfluss für Bilddaten – Beispiel

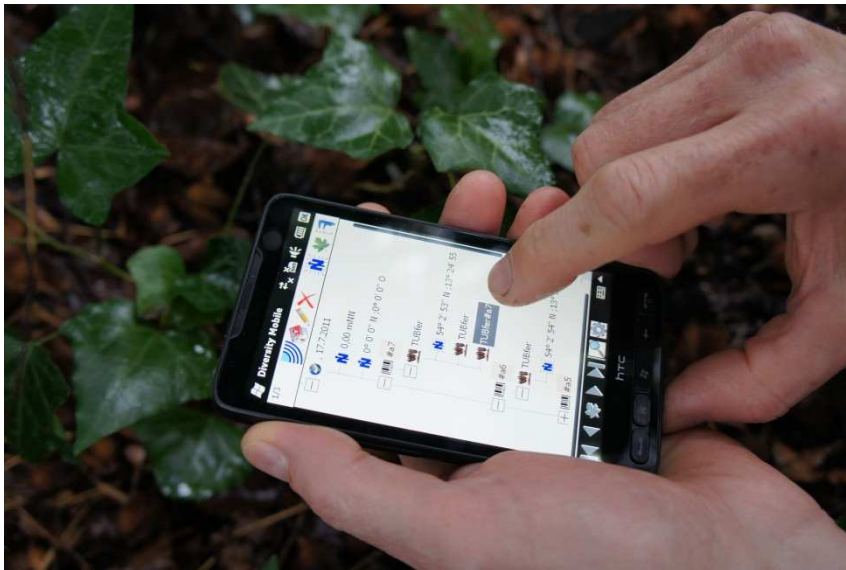




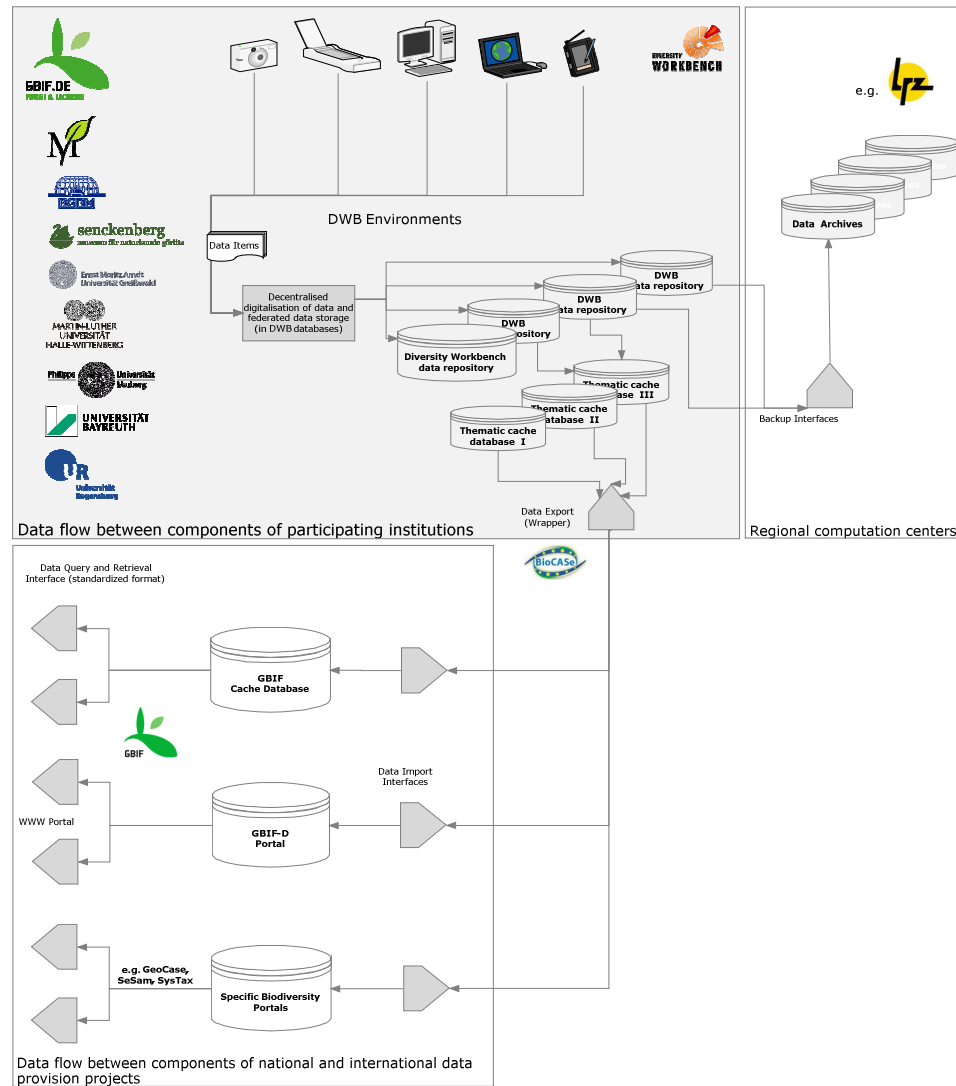
# Arbeitsstationen zur Objekt-Digitalisierung



# Mobile Arbeitsstationen: Dokumenten- und Objekt-Digitalisierung



# Datenfluss für GBIF Daten – Beispiel





# Diversity Workbench-Daten im BIB Portal

**IBF Monitoring of Vascular Plants**

Das Datenprojekt "IBF Monitoring of Vascular Plants" unter [www.diversitymobile.net/wiki/IBF\\_Plants](http://www.diversitymobile.net/wiki/IBF_Plants) wird von Wolfgang Ahlmer, Jürgen Klotz and Peter Poschold betreut. Es ist Teil des DFG-geförderten Verbundprojektes "Aufbau eines Informationsnetzes für biologische Forschungsdaten von der Erhebung im Feld bis zur nachhaltigen Sicherung in einem Primärdatenrepositorium".

Ziel ist es, Beobachtungsdaten im Feld mittels Einsatz von Smartphones zu erfassen. Die Daten werden mittels der Anwendung DiversityMobile erhoben und in Komponenten der Diversity Workbench-Plattform am SNSB IT-Zentrum überführt. Von dort werden sie dynamisch an internationale wie nationale Portale angebunden und sind auch im BIB-Portal integriert. Das Gesamtprojekt wird unter [www.diversitymobile.net](http://www.diversitymobile.net) dargestellt.

**Steckbriefe zu den Gefäßpflanzen Bayerns**

taxnr 6169

*Salix caprea* L.  
*Sal-Weide*

**Systematik und Morphologie**

- Tracheophyta
- Spermatophyta
- Magnoliophytina
- Magnoliopsida
- Dilleniidae
- Salicales
- Salicaceae
- Salix
- Salix caprea**

**Abbildungen zu *Salix caprea***

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**Verbreitung und Status**

# Diversity Workbench-Daten Webschnittstellen – Detailansicht

Firefox

The Mammalia Collection at the St... x +

snsb  
it center

The Mammalia Collection  
at the Staatssammlung für Anthropologie und Paläoanatomie  
München

STAATSSAMMLUNG FÜR  
ANTHROPOLOGIE UND  
**SAPM**  
PALÄOANATOMIE MUC

[\[About\]](#)

**Specimen data**

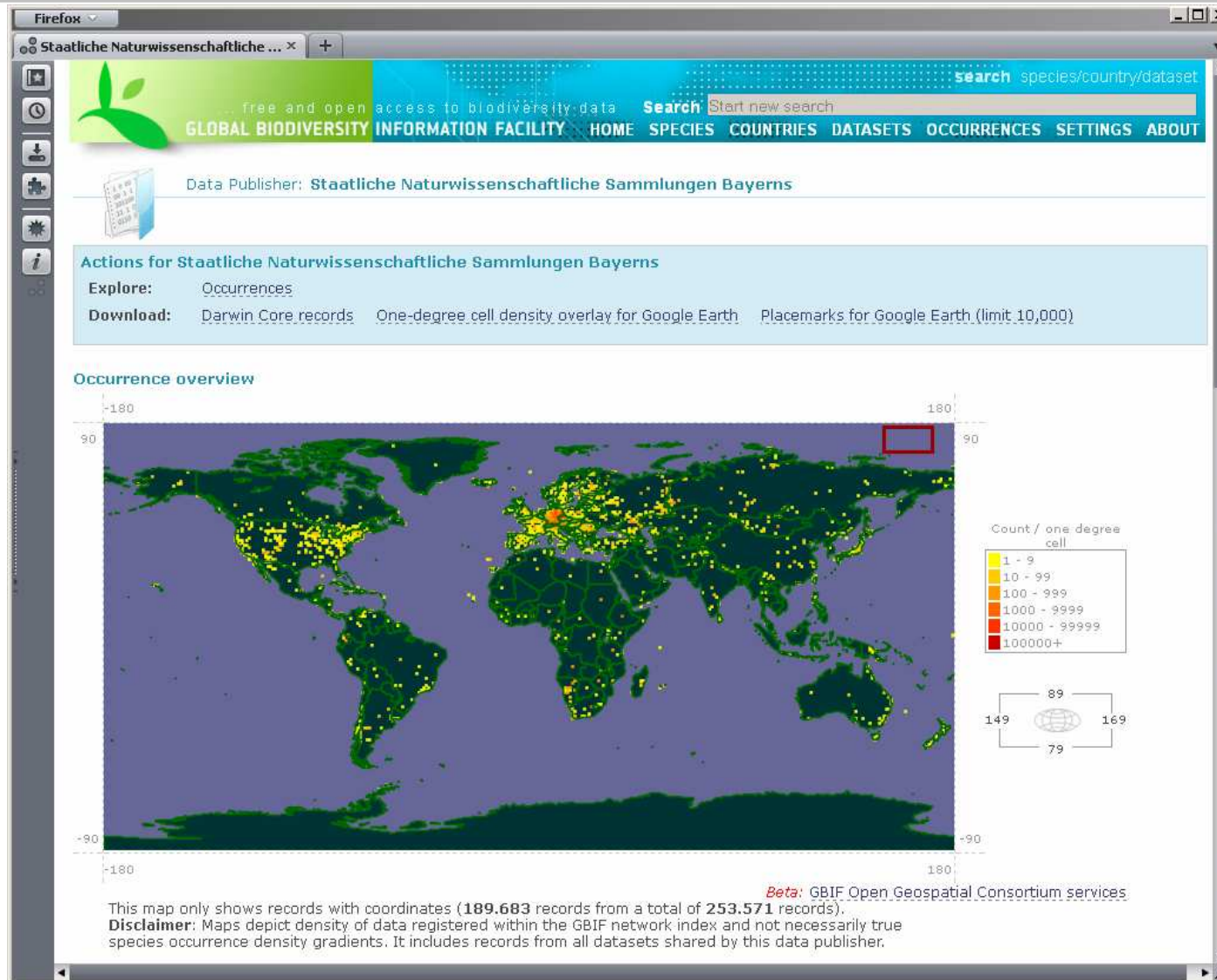
Order:	Perissodactyla
Family:	Rhinocerotidae
Taxon name:	Ceratotherium simum (Burchell, 1817)
Acc. number:	SAPM-MA-00136
Material:	complete skeleton
Gender:	female
Life stage:	subadult
Country:	Germany
Locality:	Deutschland [Tiergarten]
Date:	1988-10



[New search](#)

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# Diversity Workbench-Daten in GBIF





# Diversity Workbench-Daten – Biological Collection Access Services for Europe

The image shows two overlapping browser windows of the BioCASE Europe Portal. The left window displays the home page with a search bar and a dropdown menu for 'Ceratotherium'. The right window shows the detailed view for 'Ceratotherium simum (Burchell, 1817)'. The search results list includes 'Ceratotherium simum (4)' and 'Ceratotherium simum (1)'. The details page provides information such as 'Source Institution: SAPM', 'Unit ID: SAPM-MA-00136 / 211061 / 153754', and 'Collection: SAPMmammaliacoll'. A small image of a specimen is visible in the multimedia section.

**BioCASE Biological Collection Access Service for Europe**

Home » Search » Units » Details

Thesaurus configuration Preferences Help

**Search**  
Simple search  
Advanced search

**Registry**

**About**

**Contributors**

**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**

BioCASE Web-Administrator, Email: admin@biocase.org, FAX: +49 (3) 0 30 838 5230  
Address: Botanischer Garten und Botanisches Museum, Freie Universität Berlin, Königin-Luise-Str. 6

GLOBAL BIODIVERSITY INFORMATION FACILITY

# Diversity Workbench-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 fields for Scientific name, Higher taxon name, Chronostratigraphic attribution, Country name, Named Area, Locality, and email address. It also includes a 'Search' button and a 'Powered by: BioCASE' logo.

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](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

Complex types

**AnalysisDateTime** [AllocthonousMaterialType](#)  
**AnalysisReferences** [AlterationType](#)  
**Certainty** [AnalysisAtomisedType](#)  
**DatingQualifier** [AssociatedFossilAssemblageType](#)  
**IdentificationAnalysis** [AssociatedMineralAssemblageType](#)  
**NamedGeologicalFeature** [BiostratigraphicAttributionsType](#)  
**StratigraphicMeasurementsOrFacts** [ChronostratigraphicAttributionsType](#)  
[EarthScienceSpecimenType](#)  
[IdentificationAnalysisType](#)  
[IdentifiersType](#)  
[IsotopeStratigraphicDeterminationsType](#)  
[LithostratigraphicAttributionsType](#)  
[MagnetostratigraphicDeterminationsType](#)  
[MineralogicalUnitType](#)  
[MineralRockIdentifiedType](#)  
[PalaeontologicalUnitType](#)  
[RadiometricDatesType](#)

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

Elements

Complex types

**AnalysisDateTime** [AllocthonousMaterialType](#)  
**AnalysisReferences** [AlterationType](#)  
**Certainty** [AnalysisAtomisedType](#)  
**DatingQualifier** [AssociatedFossilAssemblageType](#)  
**IdentificationAnalysis** [AssociatedMineralAssemblageType](#)  
**NamedGeologicalFeature** [BiostratigraphicAttributionsType](#)  
**StratigraphicMeasurementsOrFacts** [ChronostratigraphicAttributionsType](#)  
[EarthScienceSpecimenType](#)  
[IdentificationAnalysisType](#)  
[IdentifiersType](#)  
[IsotopeStratigraphicDeterminationsType](#)  
[LithostratigraphicAttributionsType](#)  
[MagnetostratigraphicDeterminationsType](#)  
[MineralogicalUnitType](#)  
[MineralRockIdentifiedType](#)  
[PalaeontologicalUnitType](#)  
[RadiometricDatesType](#)

Scientific name or a part of it (e.g. Archegosaurus\*)

Higher taxon name (e.g. Amphibia)

Chronostratigraphic attribution (e.g. Permian)

Country name (e.g. Germany)

Named Area (e.g. Saarland)

Locality (e.g. \*Saalfeld\*)

Enter your email address for a full result response email:

Limit max. number of results per database to

Wait for not more than  sec. for a database to respond (consider raising this timeout level if you get insufficient results).

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

# Diversity Workbench-Daten im SysTax-Portal

The screenshot shows a web browser window displaying the GBIF DE website. The browser's address bar shows "Wirbellose II Systax Abfrage | Gbi...". The website features a navigation menu on the left with categories like "GBIF-D Wirbellose II", "GBIF-Deutschland", and "GBIF International". The main content area is titled "Home" and "Wirbellose II Systax Abfrage", providing information about the data sources and search options. A search form is visible with fields for "data source", "restriction", "types only", "with images only", "with sound only", "sort order", and "display". The footer of the page includes copyright information: "© SysTax - Universität Ulm & Ruhr-Universität Bochum; script last modified: 16.09.2009".

Firefox  
Wirbellose II Systax Abfrage | Gbi...  
GBIF.DE  
Bundesministerium für Bildung und Forschung  
DLR  
Home  
Wirbellose II Systax Abfrage  
bereitgestellt für:  
GBIF.DE WIRBELLOSE II  
GBIF-Deutschland  
GBIF International  
User login  
Username: \*

Search  
Search this site:  
Search  
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

SysTax - German GBIF portal - zoological and botanical collection data  
help print  
search  
search advanced  
data source: all data sources  
restriction: zool. collections only  
types only:   
with images only:   
with sound only:   
sort order: taxon, institute  
display: short  
© SysTax - Universität Ulm & Ruhr-Universität Bochum; script last modified: 16.09.2009

# Diversity Workbench-Daten in Catalogue of Life

The image shows two overlapping browser windows from the Catalogue of Life website. The top window displays the 'Catalogue of Life: 2011 Annual Checklist' search interface, featuring a search bar, a 'Match whole words only' checkbox, and a 'Search' button. The bottom window displays a list of biodiversity databases with their respective logos, names, and species counts.

Database Name	Logo	Species Count
LepIndex: The Global Lepidoptera Names Index		243,006
LHD: Lacistemataceae Holistic Database		28
LIAS: A Global Information System for Lichenized and Non-Lichenized Ascomycetes <b>NEW!</b>		5,499
MantodeaSF: Mantodea Species File		2,403
MBB: Moss Bug Base		32
Mites GSDs: OlogamasidBase		446
Mites GSDs: PhytoseiidBase		2,186
Mites GSDs: RhodacaridBase		145
Mites GSDs: TenuipalpidBase		887
MOST: Moss TROPICOS Database		13,365
MOWD: Membracoidea of the World Database <b>NEW!</b>		15,392
Nomen.eumycetozoa.com		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 Forschungssammlungen** 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

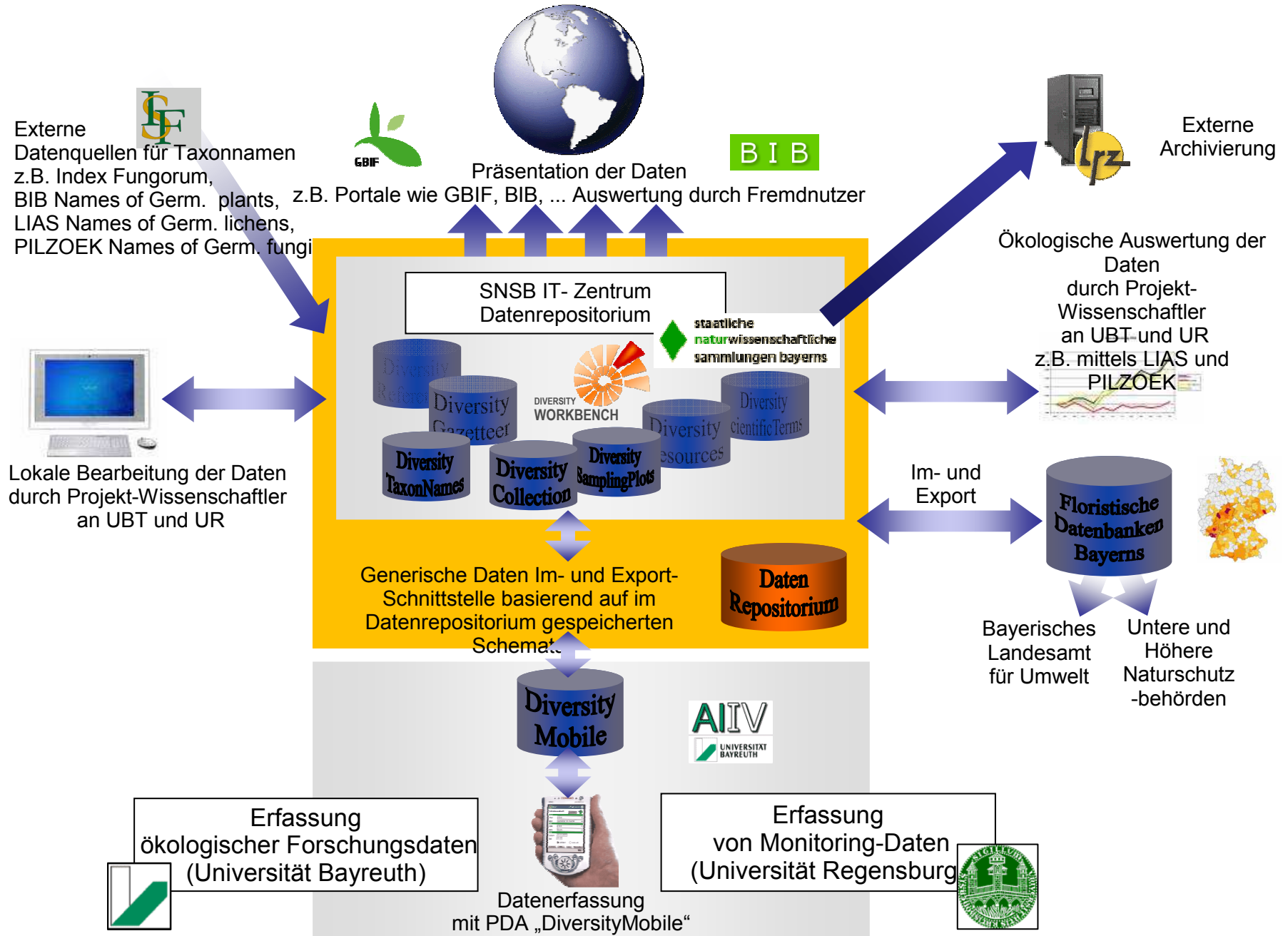
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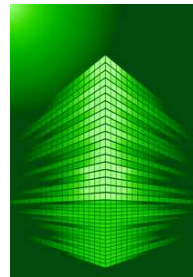
**GBIF-Publikationen demnächst im „GBIF Online Resource Centre“ zusammengefasst.**

**GBIF**

Entsprechend dem aktuellen GBIF-Arbeitsprogramm laufen



# Diversity Workbench – Workshop heute



Infos unter

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