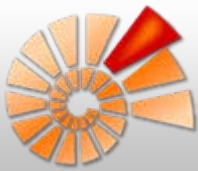


## DiversityCollection

Theorie, Projekte, Datenflüsse, Netzwerke und Dienste



# Datenbank-Framework Diversity Workbench

www.diversityworkbench.net

Seit 1999

Kooperation mit

- Julius Kühn-Institut Braunschweig – Berlin (vormals BBA)
- Universität Bayreuth
- Botanische Staatssammlung München/ SNSB

Main - Diversity Workbench Portal - Mozilla Firefox

Home | Changes | Index | Edit | Find | Go

## Diversity Workbench – Software Components for Building and Accessing Biodiversity Information

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 are involved as partners: the [Julius Kühn-Institut](#), the [SNSB – Bavarian Natural History Collections](#), and the [University of Bayreuth](#).

For each component of the Diversity Workbench 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 version providing important insight into the [framework concept](#) is, however, available.

In an initial phase during the [GLOPP project](#) (2000-2003) 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. [DeltaAccess](#) pre-dates the Workbench concepts and is still actively used and under development. Other applications are set up as part of the [GBIF-D Mycology project](#) using .Net technology and JAVA.

### Diversity Workbench information models

- DiversityCollection
- DiversityDescriptions
- DiversityExsiccatae
- DiversityGazetteer
- DiversityResources
- DiversityReferences
- DiversityTaxonomy
- DiversityTaxonNames

### Diversity Workbench applications

(Only current applications are listed here. Compare also information about older MS Access prototypes.)

- DiversityCollection
- DiversityDescriptions
- DiversityExsiccatae
- DiversityGazetteer
- DiversityReferences
- DiversityResources
- DiversityTaxonNames

A separate tool used in combination with the Microsoft Access prototype to automate the creation of documentation and information models is the [DiversityModelDocumenter](#), see there.

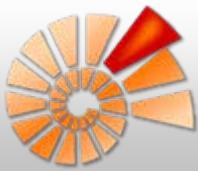
### Ongoing discussions

- Please add your topics here!

See also [Related Sites](#).

We gratefully acknowledge the help of our partner [Altova](#) in providing us with the xslt-spy software!

The DiversityWorkbench pages were first published 2000-11-15 and moved from static html to this Wiki 2006-02-07.



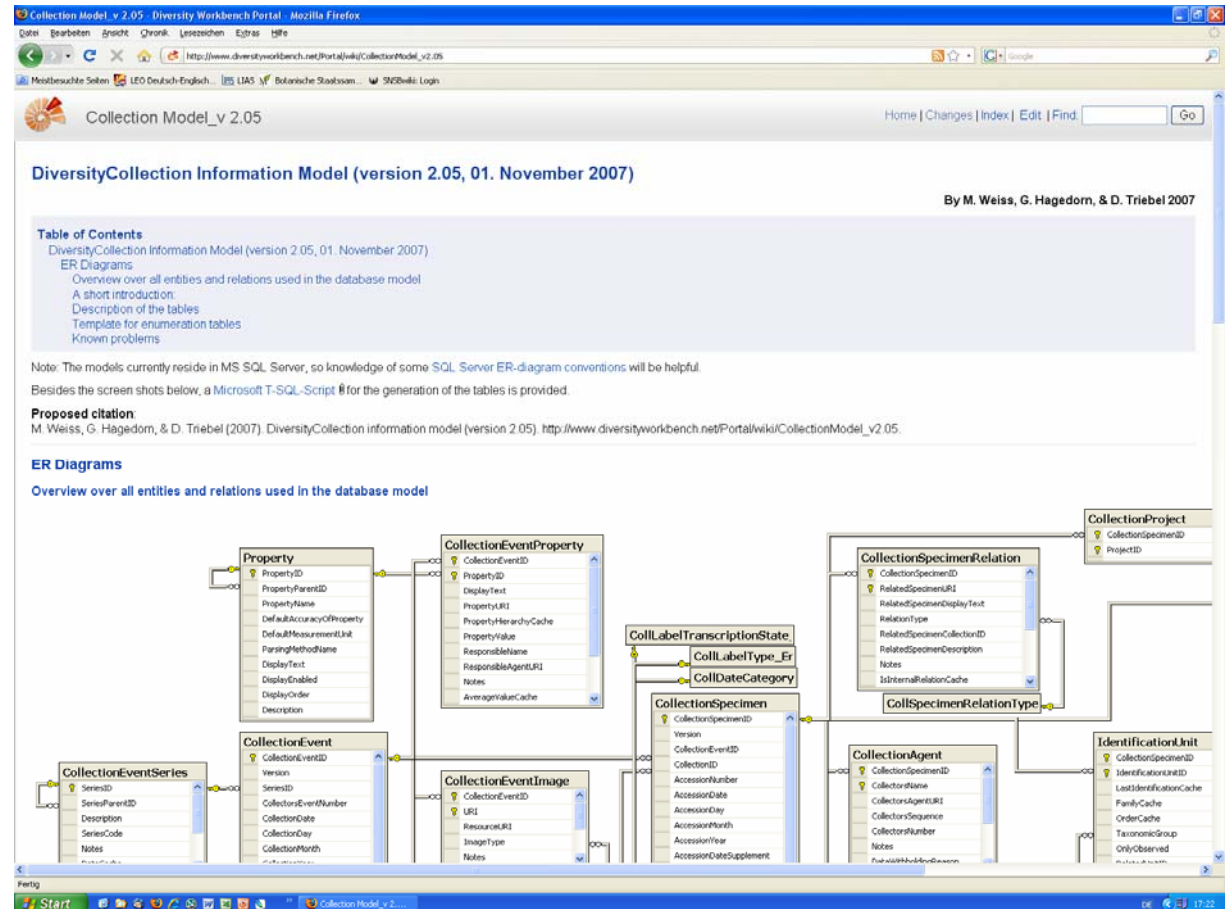
# Datenbank-Framework Diversity Workbench

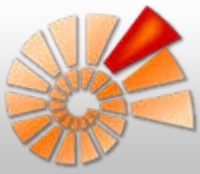
www.diversityworkbench.net

Seit 1999

Kooperation mit

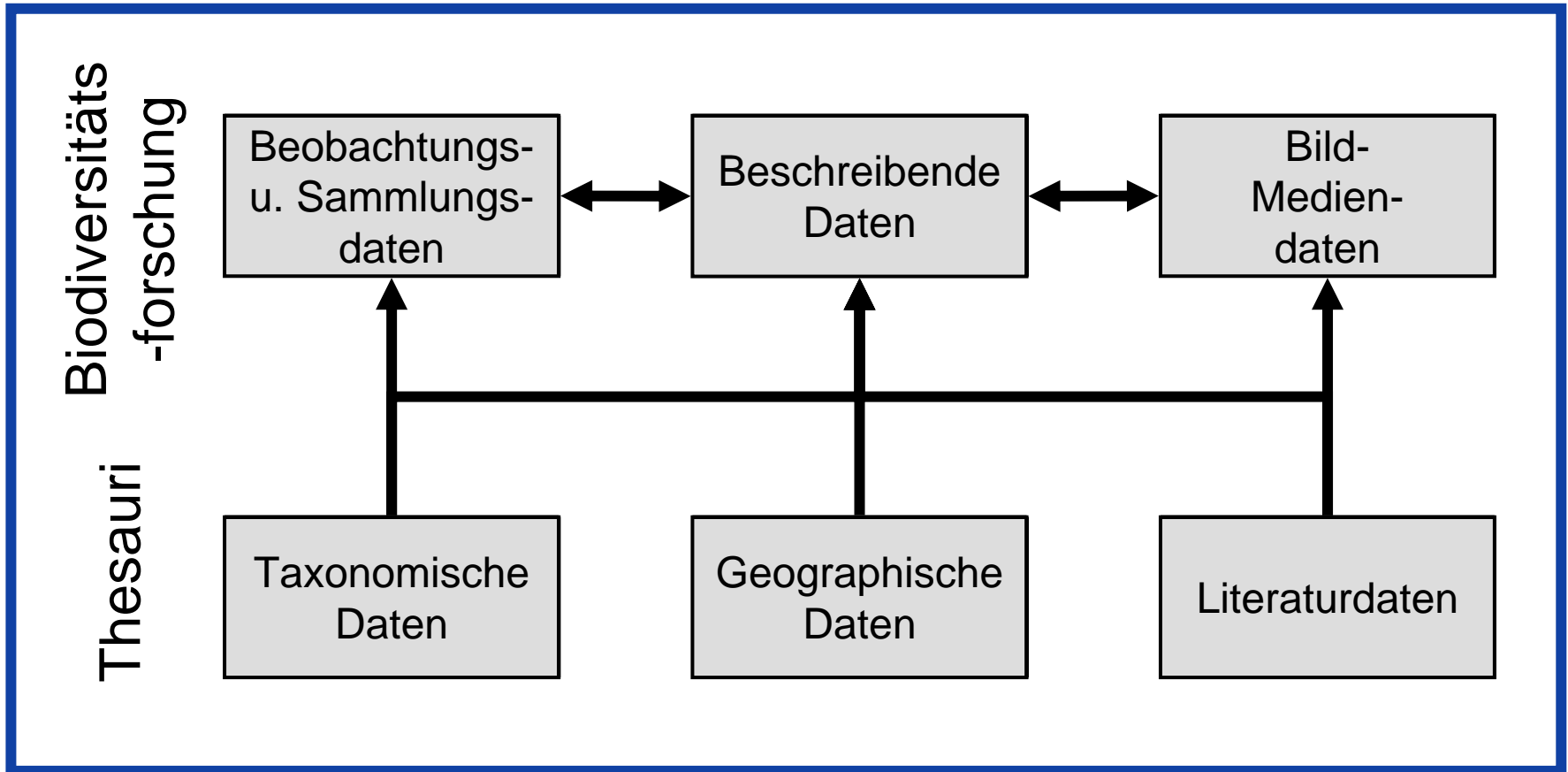
- Julius Kühn-Institut Braunschweig – Berlin (vormals BBA)
- Universität Bayreuth
- Botanische Staatssammlung München/ SNSB

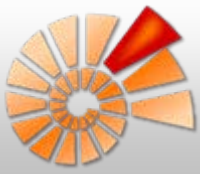




# Datentypen in der Biodiversitätsforschung

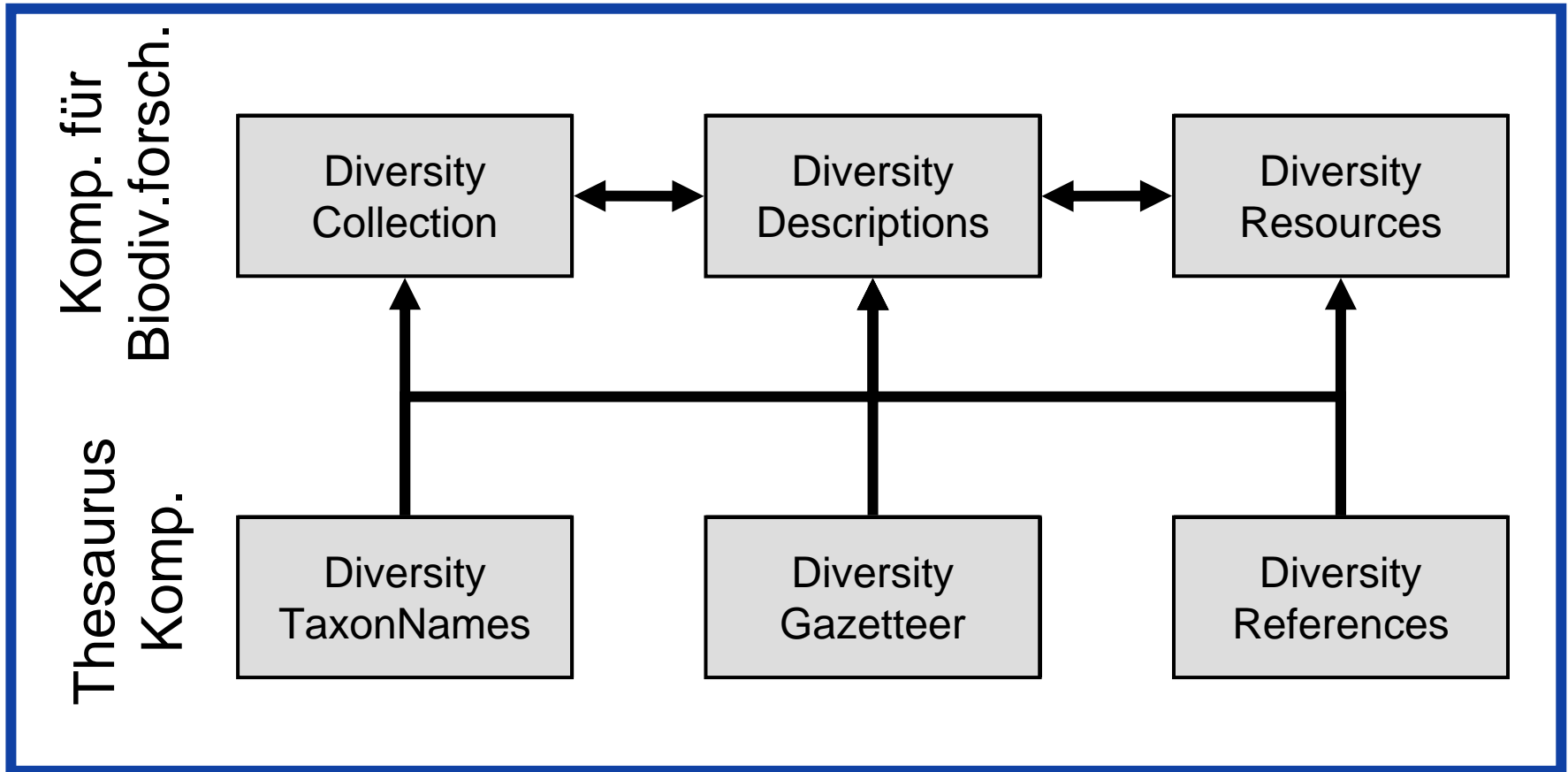
[www.diversityworkbench.net](http://www.diversityworkbench.net)

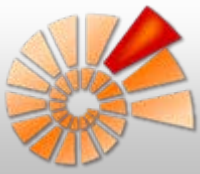




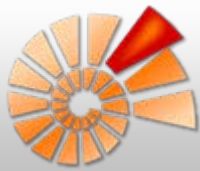
# Hauptkomponenten der Diversity Workbench

[www.diversityworkbench.net](http://www.diversityworkbench.net)



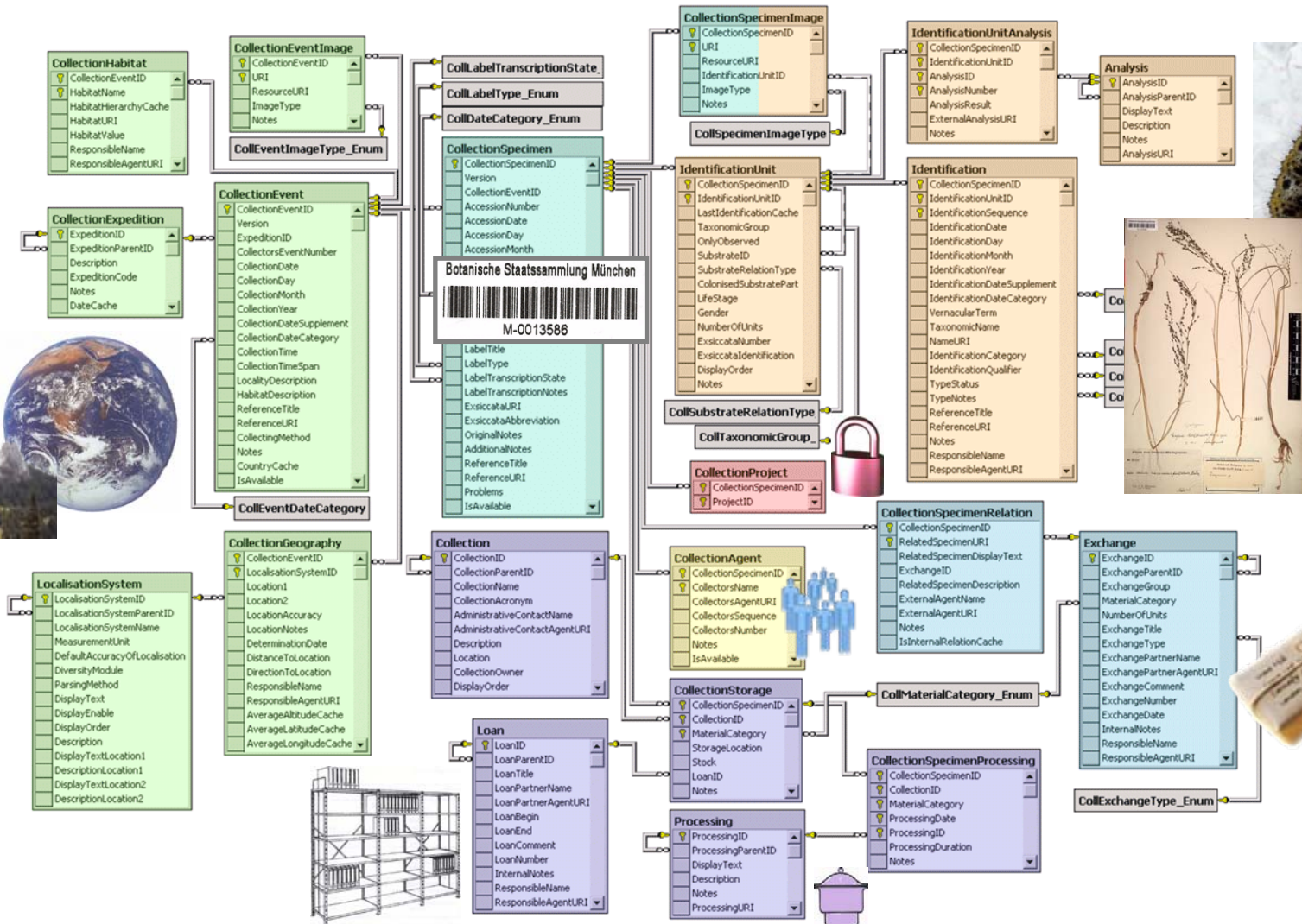


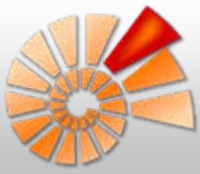
- **Schwerpunkte:**
  - Modellierung von Datenbanken (seit 1999)
  - Entwicklung von .Net Clients (seit 2002)vor allem für
  - Sammlungsdaten (seit 1999)
  - Taxonomische Daten (seit 2003)
- **In Planung:**
  - Deskriptive (inkl. organismenbezogene ökologische und molekulare) Daten



# DiversityCollection - ER-Diagramm

www.diversityworkbench.net



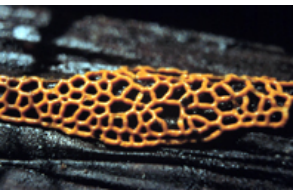


- Projekte/ Sammlungen

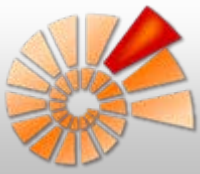
- Aktuell ca. 370.000 Datensätze
- 16 mykologische Projekte/ Samml. (davon 10 der BSM/SNSB)
- 10 botanische Projekte (davon 3 der BSM/SNSB)
- 3 zoologische Projekte (SAPM und ZSM/SNSB)
- 1 paläontologisches Projekt (BSPG/SNSB)

Datenimporte laufend ...

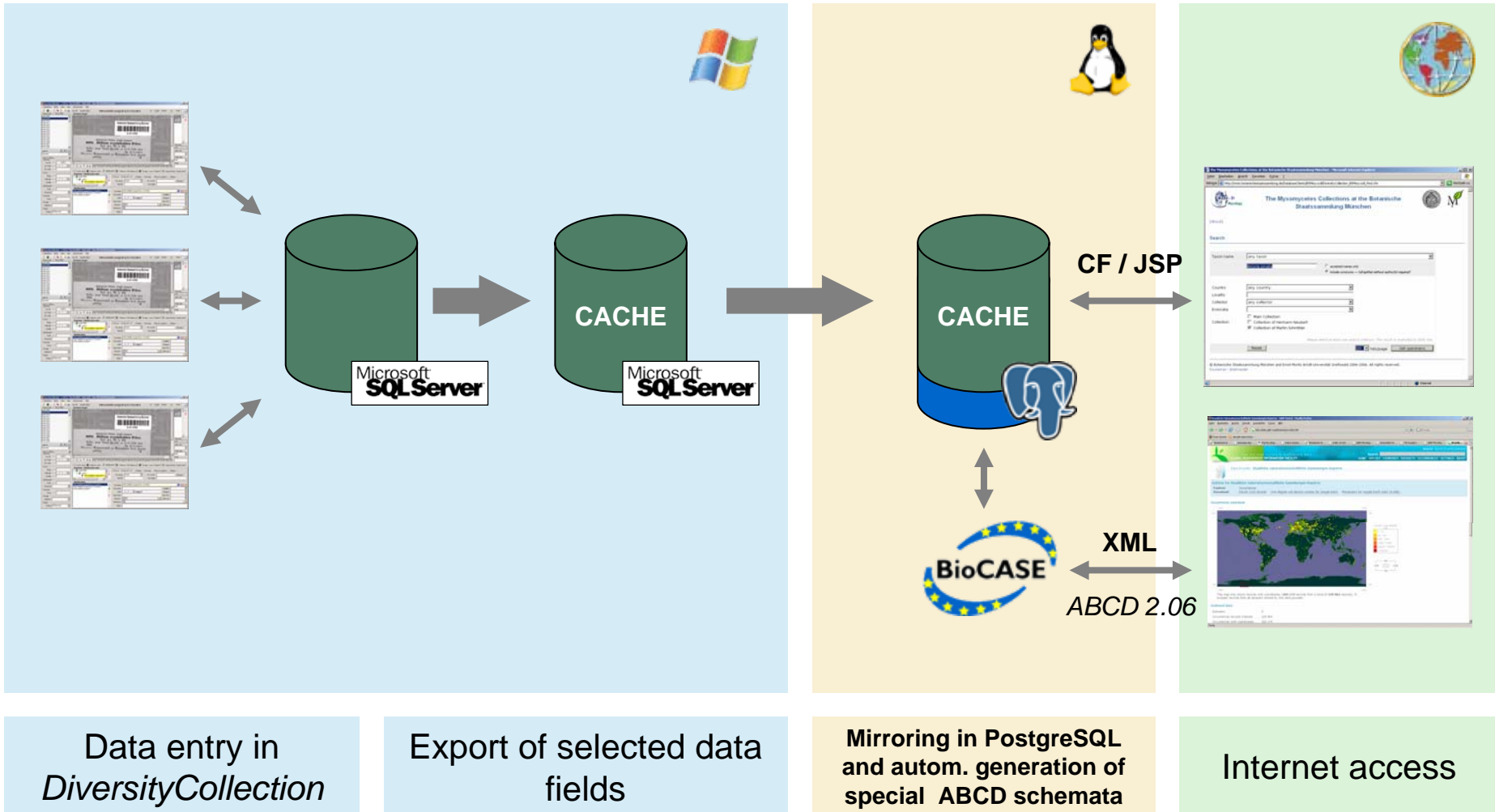
- Weitere Paläontologische Sammlungen (BSPG/SNSB)







# DiversityCollection – Datenfluss

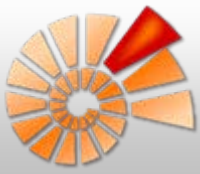


Data entry in *DiversityCollection*

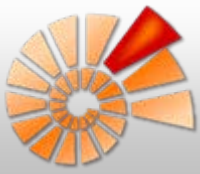
Export of selected data fields

Mirroring in PostgreSQL and autom. generation of special ABCD schemata

Internet access



- Projektspezifische Webschnittstellen (eigene Programmierung in CF bzw. JSP)
- GBIF International Portal (BioCASE-Wrapper)



# Diversity Collection: Projektspezifische Webschnittstellen

www.diversityworkbench.net

## Search

Taxon name

Country

Locality

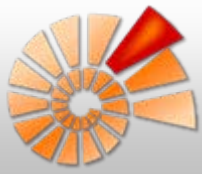
Collector

Exsiccata

Collection  Main collection  
 Collected  
 Collected

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Disclaimer · Webmaster

- Eigene Webschnittstelle für jedes Projekt bzw. jede Sammlung (derzeit 10 verschiedene Schnittstellen)
- Anbindung von speziellen Webdiensten z. B. Darstellung von Fundortdaten über *GoogleMaps*
- Einbindung von *DiversityTaxonNames*  
→ z. B. voller Zugriff auf alle Synonyme aus der Datenbank *DiversityTaxonNames\_mammals*
- **Vorteil:** Besonderheiten des einzelnen Projektes können berücksichtigt werden





# DiversityCollection: Webschnittstellen – Suchmaske

www.diversityworkbench.net

Epiphytic Lichens of G. Lettau at the Botanical Museum Berlin-Dahlem - Microsoft Internet Explorer

Adresse [http://www.gbif-mycology.de/DatabaseClients/Blettaucoll/DiversityCollection\\_Blettaucoll\\_Find.cfm](http://www.gbif-mycology.de/DatabaseClients/Blettaucoll/DiversityCollection_Blettaucoll_Find.cfm) Wechseln zu

 **Epiphytic Lichens of G. Lettau at the Botanical Museum Berlin-Dahlem** 

[About]

### Search

---

Taxon name

accepted names only  
 include synonyms — *full epithet without author(s) required!*

Country

Locality

Collector

Phorophyte

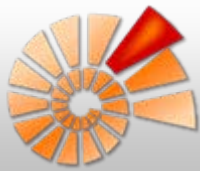
*Please select at least one search criterion! The result is restricted to 2000 hits.*

hits/page

---

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[Disclaimer](#) · [Webmaster](#)

Fertig Internet



# DiversityCollection: Webschnittstellen – Ergebnistabelle

www.diversityworkbench.net

Epiphytic Lichens of G. Lettau at the Botanical Museum Berlin-Dahlem - Microsoft Internet Explorer

Adresse [http://www.gbif-mycology.de/DatabaseClients/BleTTauColl/DiversityCollection\\_BleTTauColl\\_List.cfm?TaxonNameMainUnit=Lecanora%2520conizaeoides%2520Nyl%252E%2520ex%2520](http://www.gbif-mycology.de/DatabaseClients/BleTTauColl/DiversityCollection_BleTTauColl_List.cfm?TaxonNameMainUnit=Lecanora%2520conizaeoides%2520Nyl%252E%2520ex%2520) Wechseln zu

**Epiphytic Lichens of G. Lettau at the Botanical Museum Berlin-Dahlem**

[About]

### Search result

4 specimens (1 taxon) were found for

Taxon name: Lecanora conizaeoides Nyl. ex Cromb.  
Country: any country  
Collector: any collector  
Phorophyte: any host plant

### New search

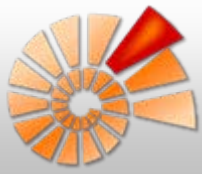
Create map using ...    
*JavaScript required*

Items 1 to 4 :

- Lecanora conizaeoides Nyl. ex Cromb. (B 60 0025251)**  
Germany, Thüringer Wald.: Unweit Bahnhof Gehlberg, 650 m.
- Lecanora conizaeoides Nyl. ex Cromb. (B 60 0025254)**  
Germany, Thüringer Wald.: Sturmheide bei Ilmenau (600 m.)
- Lecanora conizaeoides Nyl. ex Cromb. (B 60 0111827)**  
Germany, Thüringen: Alteburgenanlagen bei Arnstadt, 320 m.
- Lecanora conizaeoides Nyl. ex Cromb. (B 60 0111827a)**  
Germany, Thüringen: 2) Kichberg bei Dannheim

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Fertig



# DiversityCollection: Webschnittstellen – Detailansicht, Verknüpfung

www.diversityworkbench.net

**Epiphytic Lichens of G. Lettau at the Botanical Museum Berlin-Dahlem**

[About]

**Specimen data**

Taxon name: Lecanora conizaeoides Nyl. ex Cromb.  
→ LIASnames

Acc. Number: B 60 0025254

Country: Germany

Locality: Thüringer Wald.: Sturmheide bei Ilmenau (600 m.)

Date: 1909-03-26

Collector: Lettau, G.

Phorophyte: Betula sp.

Phorophyte/Associations:

- Betula sp.
- Lecanora conizaeoides Nyl. ex Cromb.**
- Lecanora pulicaris (Pers.) Ach.
- Scoliosporum sarothamni (Vain.) Vězda

**New search**

Create map using ...   JavaScript required

Notices of errors of any kind are much appreciated by the editorial staff.

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Fertig

**Search Result**

Entered Name: Lecanora conizaeoides Nyl. ex Cromb. [Printer friendly version](#)

Name ID: 1009522

Accepted Name: **Lecanora conizaeoides** Nyl. ex Cromb.

Synonyms:

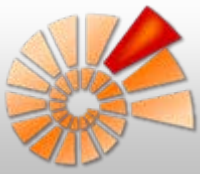
- = Lecanora pityrea Erichsen
- = Lecanora pseudovaria Degel.

Classification:

- Ascomycota
- Pezizomycotina
- Lecanoromycetes sensu Reeb et al. 2001
- Lecanoromycetidae
- Lecanorales Nannf. 1932
- Lecanoraceae Körb. 1855
- Lecanora Ach.
- Lecanora conizaeoides Nyl. ex Cromb.

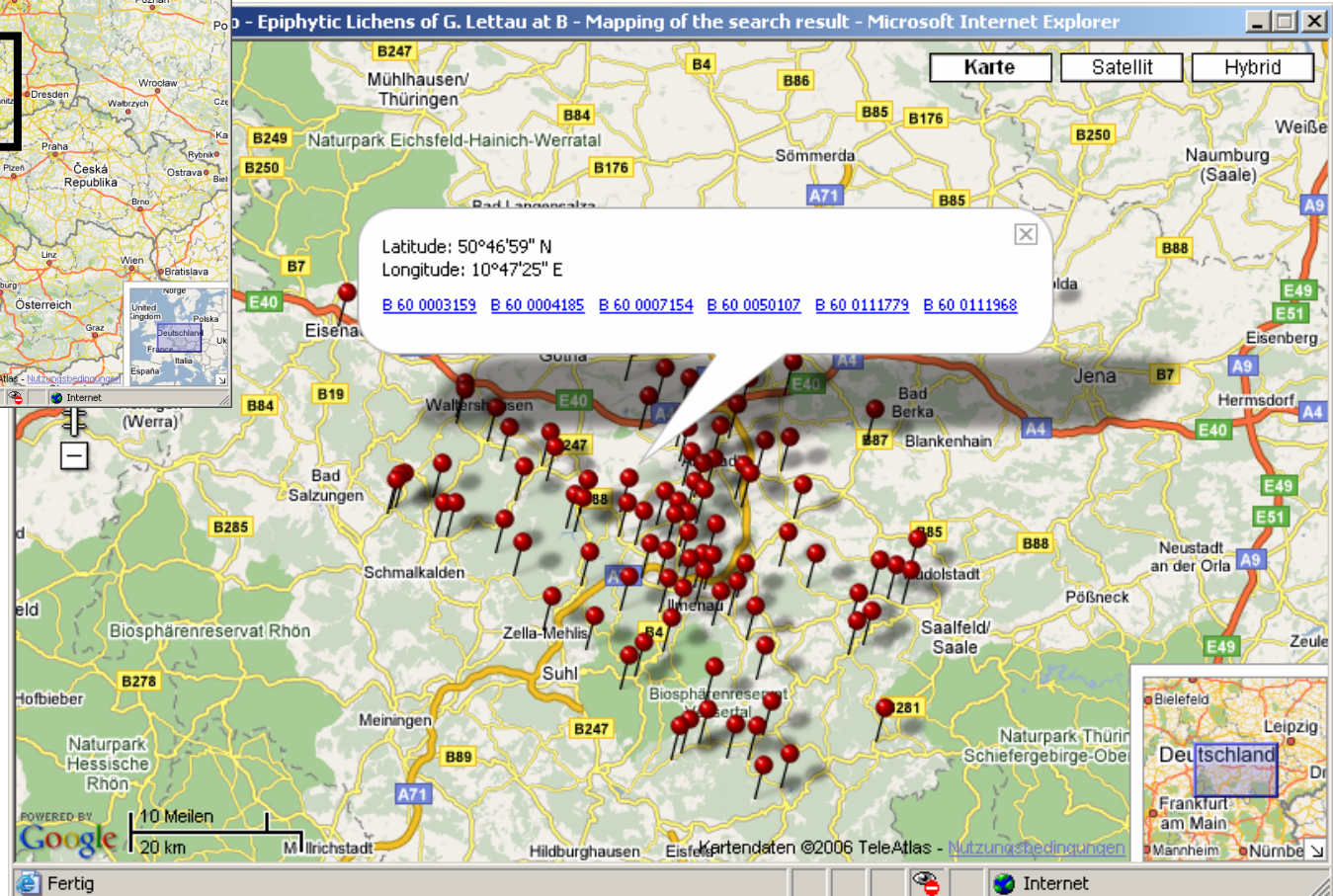
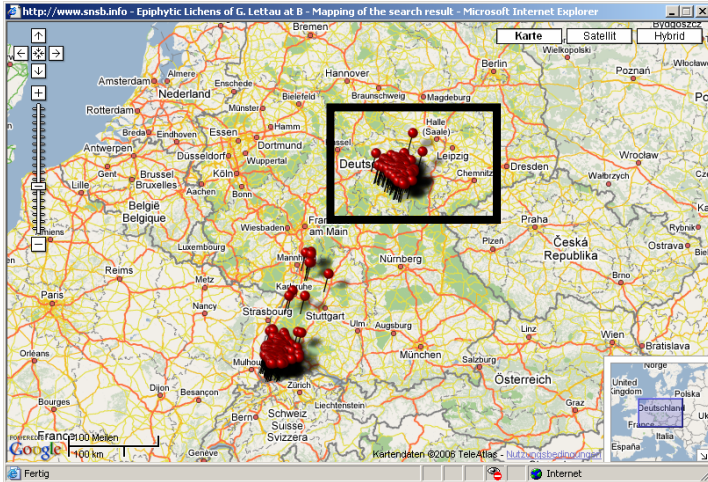
Fertig

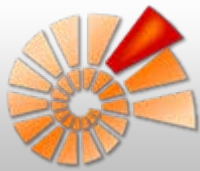
Unter diesem Namen  
wird der Beleg geführt



# DiversityCollection: Webschnittstellen – GoogleMaps Webservice

www.diversityworkbench.net





# DiversityCollection: Webschnittstellen – Suchmaske

www.diversityworkbench.net

The Mammalia Collection at the Staatssammlung für Anthropologie und Paläoanatomie München

[About]

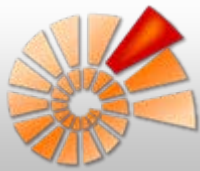
Search

Order: Perissodactyla  
Family: any family  
Taxon name: any specific taxon  
 accepted names only  
 include synonyms — full epithet without author(s) required!  
Country: any country  
Locality:   
*Please select at least one search criterion!*

Reset Get specimens

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# DiversityCollection: Webschnittstellen – Ergebnistabelle

www.diversityworkbench.net

The Mammalia Collection at the Staatssammlung für Anthropologie und Paläoanatomie München - Mozilla Firefox

http://bmi3.snb.bw.tu-muenchen.de/DatabaseClients/SAPM/mammalacoll/List.jsp

staatliche naturwissenschaftliche sammlungen bayerns

## The Mammalia Collection at the Staatssammlung für Anthropologie und Paläoanatomie München

[About]

### Search result

Order: Perissodactyla  
Family: any  
Taxon name: any  
Country: any country

149 items found, displaying 1 to 20.  
[Pages:] 1, 2, 3, 4, 5, 6, 7, 8 [Next >>]

Taxon name	Country and locality	Accession number
Ceratotherium simum (Burchell, 1817)	Germany, Deutschland. Augsburg [Institut für Tierpathologie der LMU, Zoo Augsburg]	SAPM-MA-00136
Equus asinus?	Greece, Griechenland. Kalapodi	SAPM-MA-02367
Equus asinus africanus Heuglin and Fitzinger, 1866	Germany, Deutschland. München [Tierpark Hellabrunn]	SAPM-MA-01096
Equus asinus africanus Heuglin and Fitzinger, 1866	Germany, Deutschland. München [Tierpark Hellabrunn]	SAPM-MA-01097
Equus asinus africanus Heuglin and Fitzinger, 1866	Germany, Deutschland. München [Tierpark Hellabrunn]	SAPM-MA-01098
Equus asinus Linnaeus, 1758		SAPM-MA-02358
Equus asinus Linnaeus, 1758		SAPM-MA-02359
Equus asinus Linnaeus, 1758		SAPM-MA-02360
Equus asinus Linnaeus, 1758	Greece, Griechenland. Lesbos	SAPM-MA-02361
Equus asinus Linnaeus, 1758	Greece, Griechenland. Naxos	SAPM-MA-02362
Equus asinus Linnaeus, 1758	Greece, Griechenland. Mytilene, Lesbos	SAPM-MA-02363
Equus asinus Linnaeus, 1758	Germany, Deutschland. München [Tierpark Hellabrunn]	SAPM-MA-02364
Equus asinus Linnaeus, 1758	Germany, Deutschland. München [Tierpark Hellabrunn]	SAPM-MA-02365
Equus asinus Linnaeus, 1758	Turkey, Türkei. Hazar Gölü, Ostanatolien	SAPM-MA-02366
Equus asinus Linnaeus, 1758	Germany, Deutschland. Nürnberg [Tiergarten Nürnberg]	SAPM-MA-02368
Equus asinus Linnaeus, 1758	Germany, Deutschland. München [Tierpark Hellabrunn]	SAPM-MA-02369
Equus asinus Linnaeus, 1758	Turkey, Türkei. Lidar Höyük, Osttürkei	SAPM-MA-02370
Equus asinus Linnaeus, 1758	Egypt, Ägypten. Minschat Abu Omar	SAPM-MA-02371
Equus asinus Linnaeus, 1758	Egypt, Ägypten. Minschat Abu Omar	SAPM-MA-02372
Equus asinus Linnaeus, 1758	Germany, Deutschland. Nürnberg [Tiergarten Nürnberg]	SAPM-MA-02373

Export options: CSV | Excel | XML

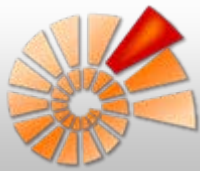
New search

Fertig

Start

The Mammalia Collecti...

DE 14:24



# DiversityCollection: Webschnittstellen – Detailansicht

www.diversityworkbench.net

The Mammalia Collection at the Staatssammlung für Anthropologie und Paläoanatomie München

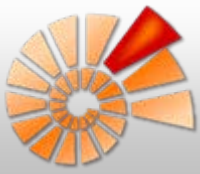
[About]

**Specimen data**

Order:	Perissodactyla
Family:	Rhinocerotidae
Specific taxon:	Ceratotherium simum (Burchell, 1817)
Acc. number:	SAPM-MA-00136
Material:	complete skeleton
Gender:	female
Life stage:	subadult
Country:	Germany
Locality:	Deutschland, Augsburg [Institut für Tierpathologie der LMU, Zoo Augsburg]
Date:	1988-10

[New search](#)

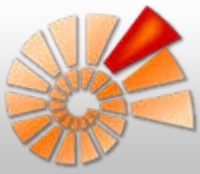
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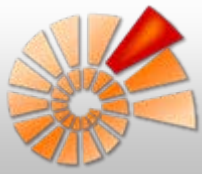
# DiversityCollection: Webschnittstellen – Detailansicht, Bild

www.diversityworkbench.net

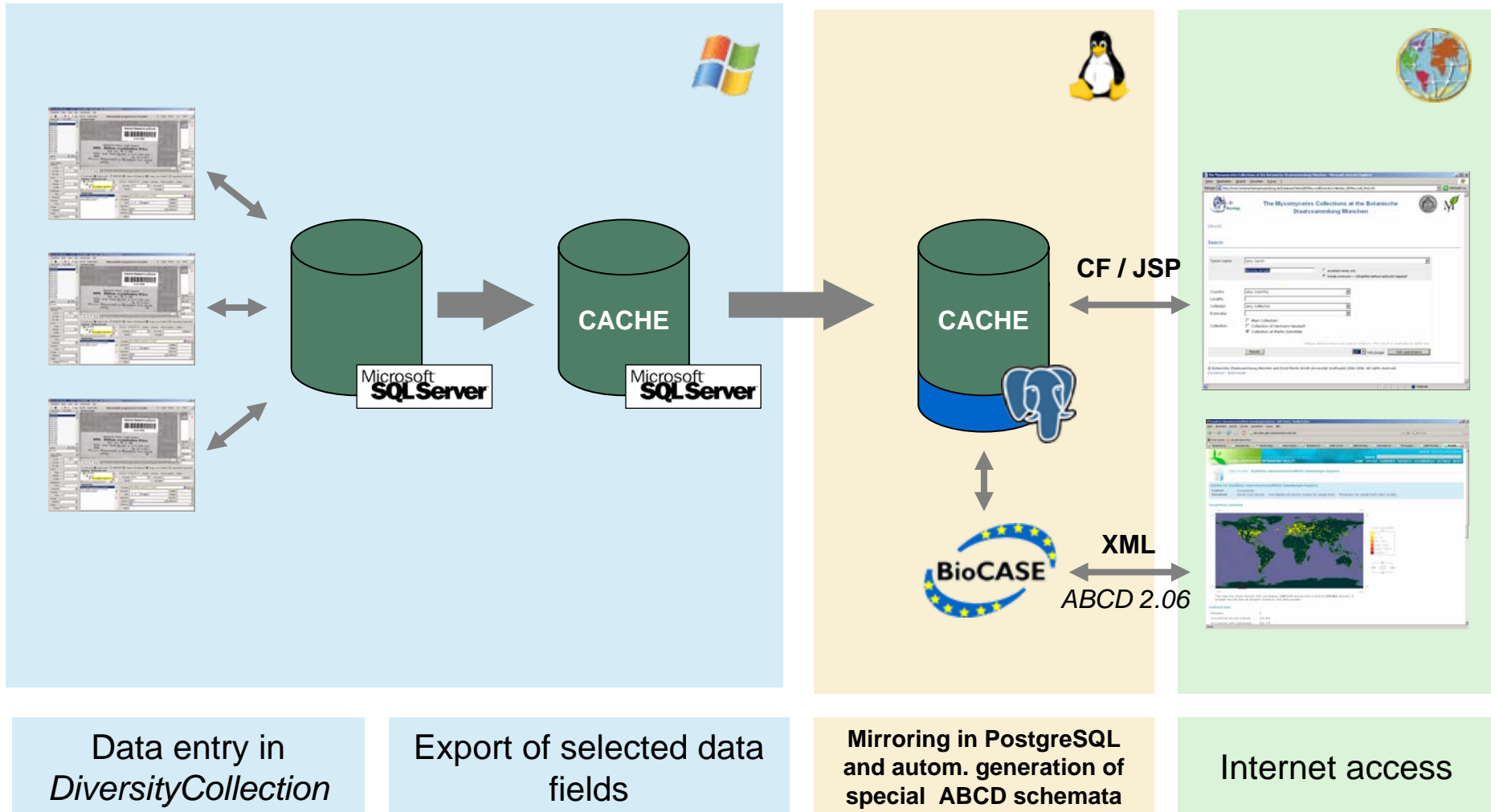




- Projektspezifische Webschnittstellen (eigene Programmierung in CF bzw. JSP)
- GBIF International Portal (BioCASE-Wrapper)



# DiversityCollection – Datenfluss

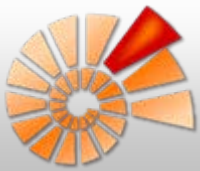


Data entry in *DiversityCollection*

Export of selected data fields

Mirroring in PostgreSQL and autom. generation of special ABCD schemata

Internet access

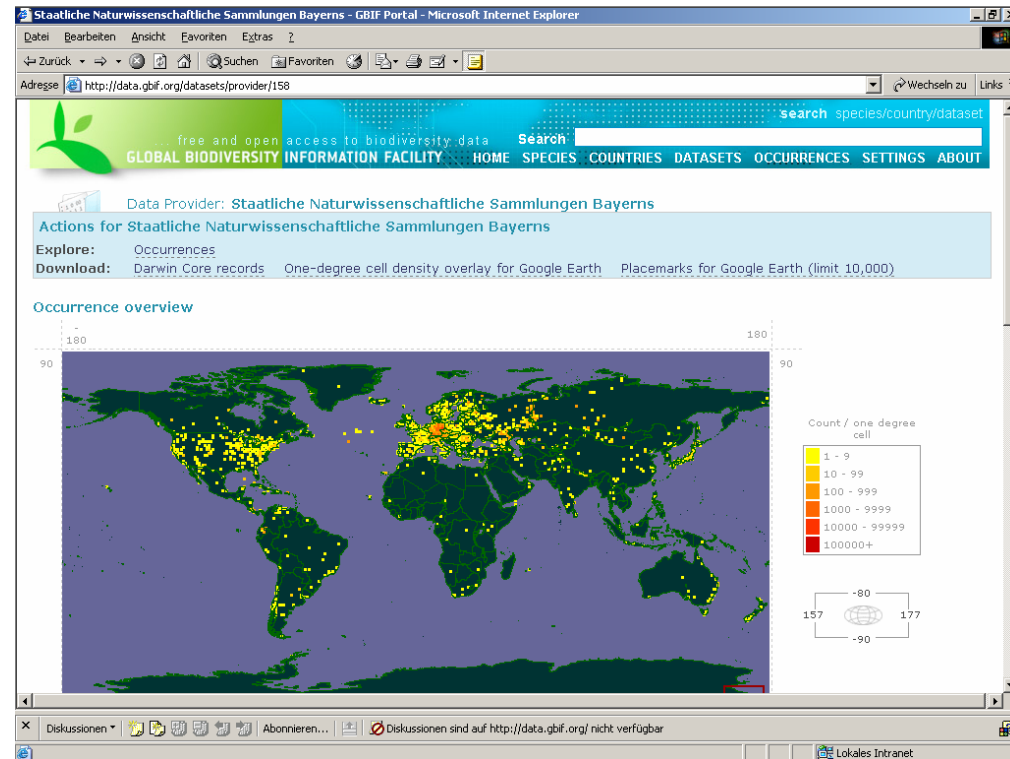


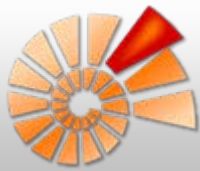
# DiversityCollection – GBIF International Portal

www.diversityworkbench.net



- 12 Projekte bzw. Datenquellen
- 131.000 Belege
- ~ 102.000 Belege mit Koordinaten
- ~ 9.500 Taxa
- 100% an GBIF-Namensindex angeschlossen





- Daten über gemeinsames internationales Portal verfügbar, verbleiben auf dem eigenen Server
- Von SNSB werden aktuell 46 *Concepts* (= Datenfelder) an GBIF International geliefert
- Standardisierte Datenabfrage via BioCASE-Wrapper über ABCD-Protokoll
- **Vorteil:** Einheitliche Datenstruktur für alle angebundenen Projekte bzw. Sammlungen (zur Zeit über 300 Datenprovider mit rund 700 Datenquellen bei GBIF)

## GBIF DATA (PROTOTYPE)

- Browse
- Search
- How to search
- Providers
- Data policy
- Google Earth

## ABOUT GBIF

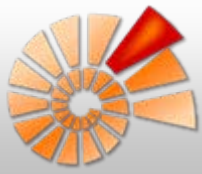
- Press
- What is GBIF?
- Demonstration Projects
- New MOU (2007-2011)
- Signatory table
- GBIF's Current Members
- How to Join GBIF
- GBIF Directory
- Documents & History
- Ebbe Nielsen Prize
- Symposia & Workshops
- Work Programme

## TOOLS AND SERVICES

- Newsletters
- Mailing lists
- Wiki
- UDDI registry
- Standards
- Links
- CIRCA
- Calls for tender and jobs
- GBIF tools download

## SUPPORT

- GB documents (basic)

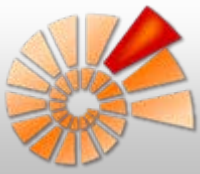


# DiversityCollection Aktuell: Daten-Projekt „Bayerische Referenz-Aufsammlungen von Pilzen“

www.diversityworkbench.net

The screenshot displays the DiversityCollection v. 2.5.5.0 interface. The main window shows a satellite map of a forest area with several red markers indicating specimen collection sites. The title bar indicates the user is 'BOTSAMML241Triebel'. The left sidebar contains a list of specimen IDs (M-0013721 to M-0013741) and a 'Query conditions' section with fields for Project, Specimen, Acc.No., Depositor, and Date. The right sidebar shows a detailed view of a specimen record for 'Blumeria graminis (DC.) Speer', including its taxonomic classification and collection details. The bottom status bar shows the system tray with the Start button and the time 17:41.





DFG-Projekt: Aufbau eines Informationsnetzes für  
biologische Forschungsdaten von der Erhebung im Feld  
bis zur nachhaltigen Sicherung in einem  
Primärdatenrepositorium

Siehe **[www.diversitymobile.net](http://www.diversitymobile.net)**

Externe Datenquellen für Taxonnamen  
z.B. Index Fungorum,  
BIB Names of Germ. plants,  
LIAS Names of Germ. lichens,  
PILZOEK Names of Germ. fungi



BIB

Präsentation der Daten

z.B. Portale wie GBIF, BIB, ... Auswertung durch Fremdnutzer



Externe Archivierung

Ökologische Auswertung der Daten  
durch Projekt-Wissenschaftler  
an UBT und UR  
z.B. mittels LIAS und  
PILZOEK



Lokale Bearbeitung der Daten  
durch Projekt-Wissenschaftler  
an UBT und UR



Generische Daten Im- und Export-Schnittstelle basierend auf im Datenrepositorium gespeicherten Schemata

Im- und Export



Bayerisches Landesamt für Umwelt

Untere und Höhere Naturschutz-behörden



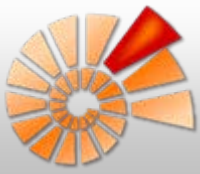
Erfassung ökologischer Forschungsdaten (Universität Bayreuth)



Erfassung von Monitoring-Daten (Universität Regensburg)



Datenerfassung mit PDA „DiversityMobile“



# DiversityCollection: Workshop heute

www.diversityworkbench.net

Infos unter

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