

BiNHum

Powerful Access to Natural History Collections

BiNHum

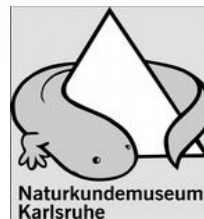
The **B**iodiversity **N**etwork of the **H**umboldt Ring

The Humboldt-Ring



BiNHum is a joint project of six German natural history museums and research collections:

museum für
naturkunde
berlin



staatliche
naturwissenschaftliche
sammlungen bayerns



The 6 institutes with have about
100 000 000 specimen in their collections!



The 6 institutes with have about
100 000 000 specimen in their collections,
only 5% are digitized.

The 6 institutes with have about
100 000 000 specimen in their collections,
only 5% are digitized,
distributed over dozens of data bases.



The Goal of the Project

- collect the collection data
- data remains with the data providers
- refine and enrich the data
- publish collection data in a unified web portal

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- collect the collection data
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- **publish collection data in a unified web portal**

The BiNHum Web Portal: Key features



<http://demo.binhum.net>

- unified access to all (available) collection data
- intuitive web interface
- suitable for working in scientific contexts

A Sample Search



The **BiNHum-Portal** is a joint Humboldt-Ring project, for querying the biodiversity data of different institutions.

BiNHum Search

12,520 results Page: 1 of 1251. Batch size::

Results filtered by

Type status:
isotype
Remove all filters.

Additional Filter

Scientific name













Thelotrema albidopal ... (20)
Tilia flavescens (14)
Rubus conothyrsoides (10)
...more

Genus

Astragalus (227)
Selaginella (168)
Hieracium (131)
...more

Country

Brazil (1385)


List	Table	Map	Dashboard				
Scientific name ▼	Genus	Country	Type status	Collector	Institution	Collection	
<input checked="" type="checkbox"/>  <i>Aberia verrucosa</i>	Aberia	Ethiopia	isotype	W. Schimper	BGBM	Herbarium Berolinense	
<input checked="" type="checkbox"/>  <i>Abildgaardia laxespicata</i>	Abildgaardia	Unknown or unspecified Africa	isotype	Robinson, E.A.	M	BSMvplantscoll	
<input checked="" type="checkbox"/>  <i>Abildgaardia scrobiculata</i>	Abildgaardia	Unknown or unspecified Africa	isotype	Robinson, E.A.	M	BSMvplantscoll	
<input checked="" type="checkbox"/>  <i>Abolboda ebracteata brevifolia</i>	Abolboda	Venezuela, Bolivarian Republic Of	isotype	J. J. Wurdack & L. S. Adderley	BGBM	Herbarium Berolinense	
<input checked="" type="checkbox"/>  <i>Abrus precatorius africanus</i>	Abrus	Kenya	isotype	R. Polhill & S. Paulo	BGBM	Herbarium Berolinense	
<input checked="" type="checkbox"/>  <i>Abrus schimperii</i>	Abrus	Unknown or unspecified Africa	isotype	Schimper, G.F.W.	M	BSMvplantscoll	

View Results on Map

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BiNHum

The biodiversity portal of the




HUMBOLDT-RING
Verband deutscher Forschungsmuseen
Berlin Bonn Karlsruhe München Stuttgart

The **BiNHum-Portal** is a joint Humboldt-Ring project, for querying the biodiversity data of different institutions.

BiNHum Search

281 results Page: 1 of 28. Batch size:: 10

List Table Map Dashboard



Karte Satellit

Results filtered by

- ISO Country Code: SE
- Collection: BSMfungicoll
- Collector: Lundell, S.

Remove all filters.

Additional Filter

Scientific name

- Pinus (24)
- Abies (18)
- Populus tremula (17)

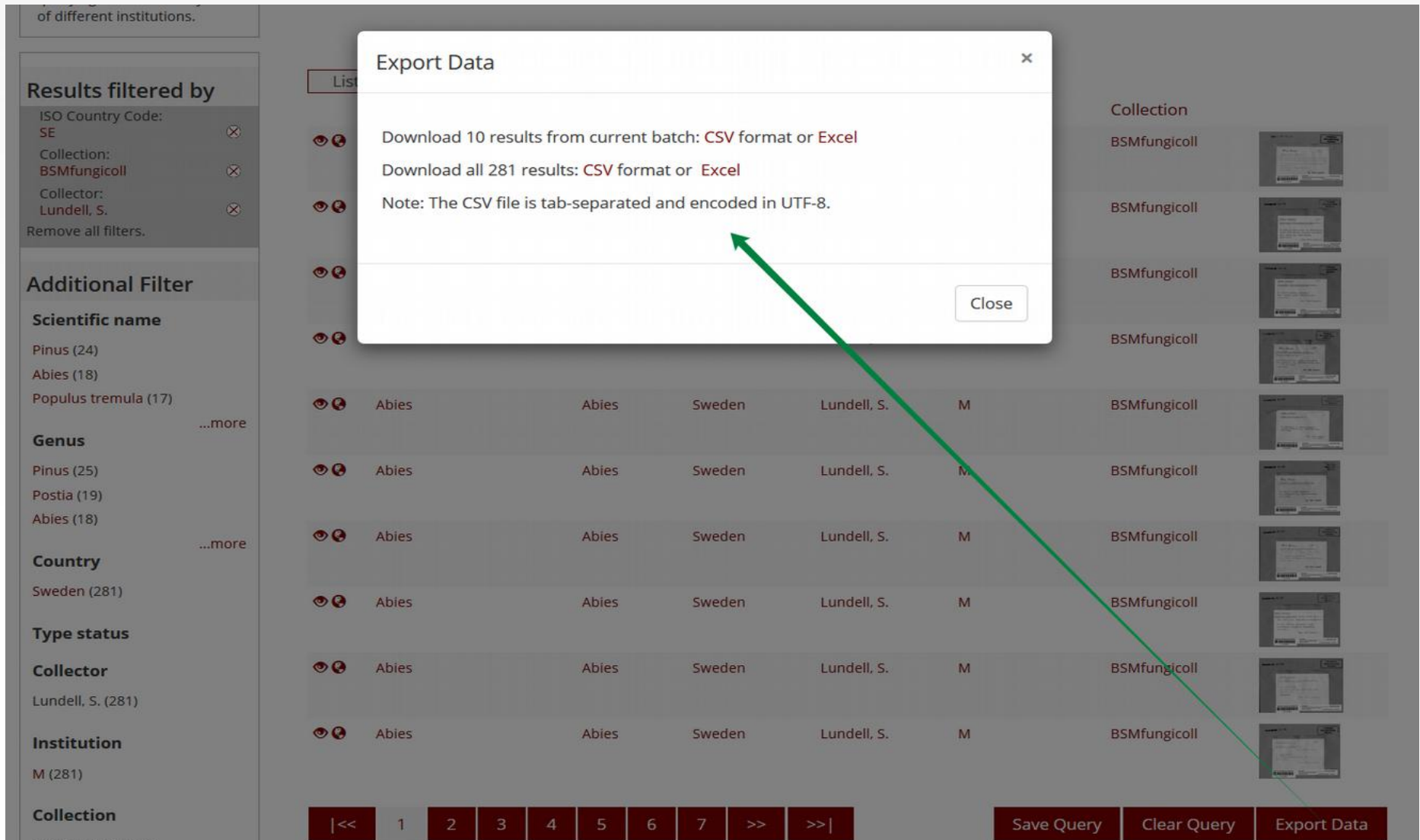
...more

Genus

- Pinus (25)
- Postia (19)
- Abies (18)

more

Export Results



The screenshot shows the BiNHum interface with an 'Export Data' dialog box open. The dialog box contains the following text:

Export Data

Download 10 results from current batch: **CSV format** or **Excel**

Download all 281 results: **CSV format** or **Excel**

Note: The CSV file is tab-separated and encoded in UTF-8.

Close

The background interface shows a list of results with columns for scientific name, country, collector, and institution. The 'Export Data' button is highlighted in the bottom right corner of the interface.

View Record Details

Aaronsohnia factorovskyi

Aaronsohnia factorovskyi Warb. & Eig.



Info	BioCASE	Red List	Annotation
------	---------	----------	------------

Basic Info

Record Basis PreservedSpecimen

Genus Aaronsohnia

Higher Taxa COMPOSITAE

Collection

Institution BGBM

Collection Herbarium Berolinense

Collector A. Eig

Collector Number

Field Number

Identifier O. Warburg & A. Eig

Unit ID B 10 0093156

Gathering

Country Palestine, State Of

Year


Date 05.04.1927

Locality Between Jerusalem and Jericho.

Access BioCAsE source

- `<biocase:content recordCount="0" recordDropped="0" recordStart="0" totalSearchHits="0">`
- `<biocase:capabilities>`
- `<biocase:SupportedSchemas namespace="http://www.tdwg.org/schemas/abcd/2.06" request="true" response="true">`
- `<biocase:Concept datatype="normalizedString" searchable="1">`
/DataSets/DataSet/ContentContacts/ContentContact/Address
`</biocase:Concept>`
- `<biocase:Concept datatype="normalizedString" searchable="1">`
/DataSets/DataSet/ContentContacts/ContentContact/Email
`</biocase:Concept>`
- `<biocase:Concept datatype="normalizedString" searchable="1">`
/DataSets/DataSet/ContentContacts/ContentContact/Name
`</biocase:Concept>`
- `<biocase:Concept datatype="normalizedString" searchable="1">`
/DataSets/DataSet/ContentContacts/ContentContact/Phone
`</biocase:Concept>`

Annotate a Record

BiNHum
The biodiversity portal of the
 **HUMBOLDT-RING**
berlin
bonn
Karlsruhe
München
Stuttgart
Verband deutscher Forschungsmuseen

The **BiNHum-Portal** is a joint Humboldt-Ring project, for querying the biodiversity data of different institutions.

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BiNHum Search



1 results

Aa chiogena

Aa chiogena Schltr.

[Info](#) [BioCASE](#) [Red List](#) [Annotation](#)

Found 2 annotations for this record

Motivation	Annotator	Date	Details
DuplicateLocality	Christian Köhler	2014/9/18	
RecordBasis	Christian Köhler	2014/9/18	

[Add Annotation](#)

Scientific name
Aa chiogena (1)

Genus
Aa (1)

Country
Bolivia, Plurination ... (1)


Type status

Collector
C. Troll (1)

Institution
BGBM (1)

Collection

Statistics about different attributes

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BiNHum Search

843 results

List Table **Map** Dashboard

Dashboard

collectorname	
Auzinger, Helene	7
Bergmann, Hans-Heiner	7
Conrads, Klaus	282
Ernst, Stephan	1
Fischer, Stefan	7
Franke, Patrick	94

Results filtered by

Media:
audio/mp3

Scientific name:
Fringilla coelebs

Country:
Germany

Remove all filters.

Additional Filter

Scientific name

Fringilla coelebs (843)

Synonyms (Common Names)



Das **BiNHum-Portal** ist ein Gemeinschaftsprojekt des Humboldt-Rings und ermöglicht die Abfrage von Biodiversitäts- daten verschiedener Institute.

Filter

Scientific name

Abies religiosa (7)
Flavopunctelia flave ... (1)
Ramalina (1)

Genus

Abies (7)
Flavopunctelia (1)
Ramalina (1)

Country

Mexico (6)
Unknown or unspecifi ... (2)
Nepal (1)

BiNHum-Suche

Sacred fir



Finden

9 Treffer.

List	Table	Map	Dashboard			
Scientific name ▼	Genus	Country	Collector	Institution	Collection	
Abies religiosa	Abies	Mexico	N.A.	BGBM	Herbarium Berolinense	
Abies religiosa	Abies	Unknown or unspecified country	N.A.	BGBM	Herbarium Berolinense	
Abies religiosa	Abies	Unknown or unspecified country	N.A.	BGBM	Herbarium Berolinense	
Abies religiosa	Abies	Mexico	Hartwig	BGBM	Herbarium Berolinense	
Abies religiosa	Abies	Nepal	Lumbert	BGBM	Herbarium Berolinense	
Abies religiosa	Abies	Mexico	C. A. Ehrenberg	BGBM	Herbarium Berolinense	
Abies religiosa	Abies	Mexico	Ehrenberg	BGBM	Herbarium Berolinense	
Flavopunctelia flaventior	Flavopunctelia	Mexico	Hans Inberg	BGBM	Lichen Herbarium Berlin	
Ramalina	Ramalina	Mexico	Hans Inberg	BGBM	Lichen Herbarium Berlin	

Save Query

Clear Query

Export Data

Portal Key Features

- fast (!) search
- intuitive browsing of data
- map view
- export data
- add annotations
- filter and sort data at a click
- Include external information (red list status, synonyms, Wikipedia, ...)

The HIT Tool: Collecting Data

Currently we harvest 60 different data bases
with 1.5 Million data sets
using the HIT-Tool.

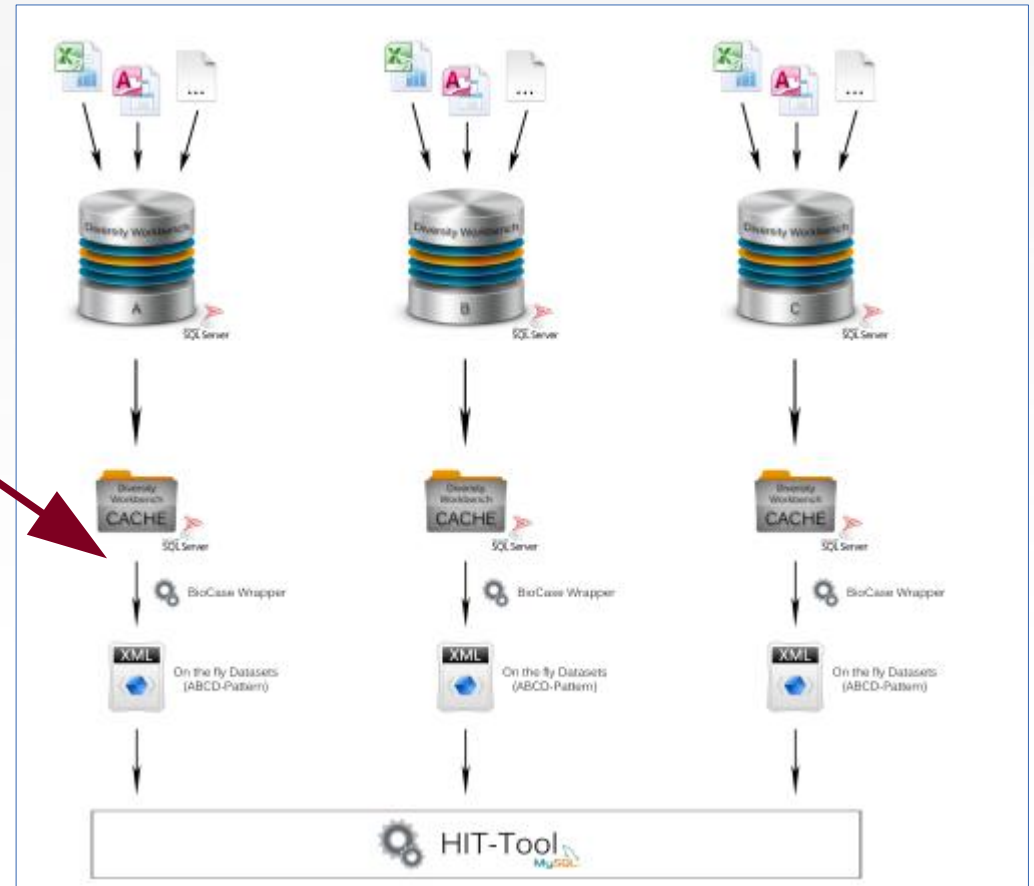
The HIT Tool: Collecting Data

Currently we harvest 60 different data bases
with 1.5 Million data sets
using the HIT-Tool.

Give us more data! – We are
ready for > 10 Million.

How do we get the Data? Collecting!

- Collecting Data online from **ABCD** data sources
- Testing data
- Refining data
- Give feedback to data providers
- Store data in MySQL data base



How do we get the Data? Collecting!

- Collecting Data online from **ABCD** data sources
- Testing data
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The HIT-Tool: more information



Presentation:

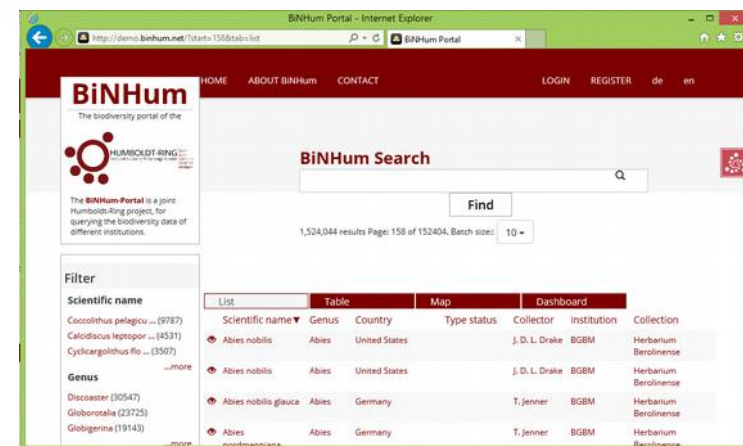
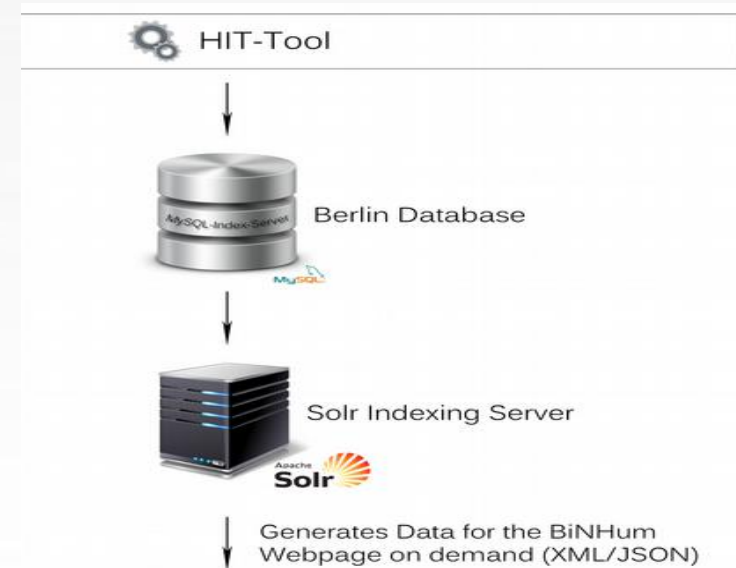
Using the **Harvesting and Indexing Toolkit** in
Special Interest Networks

Gabriele Droege, Patricia Kelbert, Jörg
Holetschek, Anton Güntsch.

Today: 9.45 AM – 10.00 AM – room 10

Solr: powerful and fast searches

- Solr provides fast searches on large data sets (millions)
- Open source
- Solr indexes data from MySQL
- Provides auto complete, regional searching, suggestions, synonyms, ...



The BiNHum Widget

How to get the “precious” data from curators,
institutes, ...



The BiNHum Widget



As a incentive for data providers we provide a small tool to integrate a custom search to existing web pages.

Use cases:

- Present own collection on personal / institute web page
- Provide custom data set for project
- Scientists show there "own" data on personal homepage

The BiNHum Widget: Stand alone

'Explore SMNS collections through a partial BiNHum portal.'

STÄATLICHES MUSEUM FÜR NATURKUNDE STUTTGART
Forschungsmuseum Am Ulmerstor und Schloss Rosenstein

SMNS collections

485 results Page: 1 of 19. Batch size: 25

Filter

Scientific name	Genus	Country	Type status	Collector	Institution	Collection	Year	Media
Rana temporaria (71)	Rana (120)	Germany (485)		N.A (248)	SMNS (485)	SMNS Herpetology I (357)		
Platanus neptuni (51)	Triturus (53)			H. Hart (34)		Morphylcoll (128)		
Daphnogene (44)	Platanus (52)			A. Krauss (20)				
...more	...more			...more				

List
 Table
 Map
 Dashboard

Scientific name	Genus	Country	Collector	Institution	Collection
Aceraceae	Aceraceae	Germany	N.A	SMNS	Morphylcoll
Alytes obstetricans	Alytes	Germany	N.A	SMNS	SMNS Herpetology I
Alytes obstetricans	Alytes	Germany	A. Günther	SMNS	SMNS Herpetology I
Alytes obstetricans	Alytes	Germany	N.A	SMNS	SMNS Herpetology I
Alytes obstetricans	Alytes	Germany	N.A	SMNS	SMNS Herpetology I
Alytes obstetricans	Alytes	Germany	Koch	SMNS	SMNS Herpetology I
Alytes obstetricans	Alytes	Germany	R. Wiedersheim	SMNS	SMNS Herpetology I
Ambystoma tigrinum	Ambystoma	Germany	N.A	SMNS	SMNS Herpetology I
Anguis fragilis	Anguis	Germany	N.A	SMNS	SMNS Herpetology I
Anguis fragilis	Anguis	Germany	N.A	SMNS	SMNS Herpetology I
Anguis fragilis	Anguis	Germany	U. Schmid	SMNS	SMNS Herpetology I
Anguis fragilis	Anguis	Germany	U. Fritz	SMNS	SMNS Herpetology I

<http://binhum.smns-bw.org/>

The BiNHum Widget: Integrated



**FORSCHUNGSZENTREN UND
-GRUPPEN**

LEHRSTÜHLE, UNIVERSITÄT BONN

ZENTRUM FÜR TAXONOMIE UND
EVOLUTIONSFORSCHUNG (ZTE)

ZENTRUM FÜR MOLEKULARE
BIODIVERSITÄTSFORSCHUNG (ZMB)

ZENTRALE
FORSCHUNGSEINRICHTUNGEN

Biodiversitätsinformatik

SAMMLUNGSINVENTAR DES ZFMK

Hochleistungsrechner

Molekularlabor

Biobank

Biohistoricum

SAMMLUNGEN

PROJEKTE

PUBLIKATIONEN

BIBLIOTHEK

TAGUNGEN UND
KONFERENZEN



FORSCHUNG > FORSCHUNGSZENTREN UND -GRUPPEN > ZENTRALE FORSCHUNGSEINRICHTUNGEN > BIODIVERSITÄTSINFORMATIK > SAMMLUNGSINVENTAR DES ZFMK

ZFMK Sammlungsinventar

57,603 results Page: 1 of 5760. Batch size: 10

Filter

Scientific name	Genus	Country	Type status	Collection	Media
Tettigoniidae (517)	Andrena (2773)	Germany (25171)	paratype (81)	HYM	image/jpeg
Chorthippus bleutuli ... (449)	Chorthippus	Unknown or unsoecifi ...	topotype (36)	(19366)	(2900)

List Table Map Dashboard

Scientific name	Genus	Country	Type status	Collector	Institution	Collection
Abax beckenhauptii	Abax	Austria		K Hannig	ZFMK	COL
Abax beckenhauptii	Abax	Austria		K Hannig	ZFMK	COL
Abax beckenhauptii	Abax	Austria		K Hannig	ZFMK	COL
Abax ovalis	Abax	Austria		W. Freund	ZFMK	COL
Abax ovalis	Abax	Germany		K Hannig	ZFMK	COL

The BiNHum Widget: Configuration



Titel

Titel wird im Browser und als Seitenüberschrift angezeigt.

Institutslogo

Externe URL zu einem Logo (z.B. <http://www.zfmk.de/web/images/logo.gif>)

Instituts-URL

URL, die beim Klick auf das Logo aufgerufen werden soll.

Treffer pro Seite

Maximale Anzahl der Treffer pro Seite.

CSS-Datei

URL zu einer externen CSS-Datei, um vorhandene Styles zu überschreiben (für Fortgeschrittene).

Institutscode

Nur Objekte mit diesem Institutscode erscheinen in der Suche. Beispiel: ZFMK

Sammlung

Nur Objekte mit diesem Sammlungskürzel erscheinen in der Suche. Beispiel: Herbarium Berlinense

Land

Nur Objekte aus diesem Land (englische Schreibweise) erscheinen in der Suche. Beispiel: Italy

Institutscode

Nur Objekte dieser gattung erscheinen in der Suche. Beispiel: Campanula

Fortgeschrittene Optionen

Feld für zusätzliche Filteroptionen im Solr-Syntax (für Fortgeschrittene).
Beispiel: `fq=gatheringyear:"2011"&q=*&fq=country:"Germany"`

Benefits of the BiNHum-Widget



- free to use for any data provider
- no local installation required
- pre-filter data on own requirements
- adapt layout using CSS
- automatically participate on further development
- make own data widely available at

to do:

- Add more data
- Add personalisation (store searches, create persistent links to data sets, save sorting preferences, ...)
- Ask users, how to improve the portal. What is missing?

to do:

- **Add more data**
- Add personalisation (store searches, create persistent links to data sets, save sorting preferences, ...)
- Ask users, how to improve the portal. What are **you** missing?

My personal perspectives and wishes:

- open up to data providers outside the Humboldt Ring
- get much (!) more data sets. Aim for 100 million
- enhance the user interface and BiNHum Widget
- operation and development beyond 2015

The BiNHum Partners - Credits



Zoological Research Museum Alexander Koenig: Christian Köhler, Peter Grobe & Maik Röder

State Museum of Natural History Stuttgart: Joachim Holstein, Jörg Lange, Anita Roth-Nebelsick & Christopher Traiser

State Museum of Natural History Karlsruhe: Hubert Höfer & Florian Raub

Botanic Garden and Botanical Museum Berlin-Dahlem: Anton Güntsch, Gabriele Dröge & Patricia Kelbert

Bavarian Natural History Collections: Dagmar Triebel, Anton Link, Markus Weiss, Dieter Neubacher & Tanja Weibulat

<http://demo.binhum.net>
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