# BGBM – Botanic Garden and Botanical Museum Berlin, Freie Universität Berlin

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### About the Institution

The Botanischer Garten und Botanisches Museum Berlin (BGBM, Botanic Garden and Botanical Museum Berlin) of the Freie Universität Berlin is a centre of biodiversity research in Europe, housing extensive scientific collections of herbarium specimens (about 3.5 million), one of the world's largest living plants collections, as well as the most complete botanical library in Germany.

About the Data Center The BGBM has a strong interest in collection and observational data as well as taxon-level data management covering the entire taxonomic workflow, in particular in the field of Botany. The taxonomic expertise and interest is that of the BGBM (see http://www.bgbm.org/en/research). Taxonomic research, through which plants are identified, described, named and classified, is a central element of our daily work.
Data archived:
<ul> <li>Botanical specimen data; Referenced multimedia objects</li> <li>Botanical observational data</li> <li>Botanical systematics and monographic works</li> <li>Experimental raw data (data sets and/or data packages) only if well documented and in formats and structures appropriate for long-term archiving</li> </ul>
Contact BGBM at NFDI4Biodiversity

### Data Center Profile

Name	BGBM – Botanic Garden and Botanical Museum Berlin, Freie Universität Berlin				
URL	https://www.bgbm.org/en				
Description	The BGBM's "Research and Development Group Biodiversity Informatics and Scientific Information Systems" conducts collaborative research on national and international levels since the early 1990s. Today it comprises a strong interdisciplinary group of 25 researchers from computer science, biology, bioinformatics, and engineering. Research areas include information modeling, metadata standardization, networking of primary biodiversity data, taxonomic computing, workflow development, data rescue and archiving, and biological research collection management.				
	Important developments of the "Research and Development Group Biodiversity Informatics and Scientific Information Systems" include the EDIT Platform for Cybertaxonomy, the Biolo gical Collection Access Service (BioCASE), and the DNA Bank Network. BDI is also responsible for all research information systems developed and hosted by the BGBM (Euro+Med Plant Base, Flora of Cyprus, Cichorieae and Campanula Portal, Caryophyllales Synthesis etc.). The BGBM has a close cooperation with MfN and SNSB to support the IT management of the Biowikifarm.				
	Scientific data curation services (incl. taxonomic services)				
	The taxonomic expertise and interest is that of the BGBM (see http://www.bgbm.org/en/research). Research at the BGBM is to a large extent based on our scientific plant collections. Taxonomic research, through which plants are identified, described, named and classified, is a central element of our daily work. Furthermore, we study the phylogenesis of plants and the mechanisms of their evolution. We focus our research on the following model groups of flowering plants and microorganisms: Asterales, Caryophyllales and Diatoms.				
	Besides this, our research activities are focused on particular regions of the world, where we carry out inventories and investigations of plant diversity together with our local partners. The results of our activities include contributions to Floras, identification guides (including genetic Barcodes) and concepts for the conservation and sustainable use of plant diversity. Our focal regions are: Europe and Mediterranean area including the <i>Caucasus</i> and <i>Cuba</i> and the <i>Caribbean region</i> .				
	The BGBM has a special interest in data related to its taxonomic and regional research focal research areas.				
	The BGBM hosts the coordination Office of GBIF Germany (GBIF-D) serving as contact for the research community as well as for the media and the public. The BGBM is also responsible for the GBIF-D Botanical Node in close collaboration with several German botanical institutions and five other partner institutions as part of the German contribution to GBIF International. It represents all flowering plants, ferns, and mosses and also includes algae and protists, while lichens, fungi and myxomycetes are covered by the German Mycology node located at the Botanische Staatssammlung München, SNSB.				
Data domains (scope)	The BGBM has a strong interest in collection and observational data as well as taxon-level data management covering the entire taxonomic workflow, in particular in the field of Botany.				

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Service Description	Data archiving for research projects is focusing on:					
	Type 1a         Botanical specimen data; (Physical) DNA Storage (under discussion at BGBM); Referenced multimedia objects					
	Type Bo 1b					
	Type 2 Bo	e 2 Botanical systematics and monographic works				
		Pe 4 RAW data (data sets and/or data packages) only if well documented and in formats and structures appropriate for long-term archiving, without further data management required				
	A preference will be given on data which fall under the geographic and taxonomic research foci of the BGBM (BGBM: Research). The data archiving and publication includes management processes with JACQ, reBiND -workflow and the EDIT Platform for Cybertaxonomy as well as the data quality service platform and transformation and import services provided by BGBM.					
						Based on the international herbarium data management system JACQ (25 herbaria), the EDIT Platform for Cybertaxonomy, as well as the GFBio Terminology Services.
	Data submission and accession					
	JACQ import form     EDIT Platform import library and interfaces     Terminology upload services					
	Data integration and management					
	<ul> <li>EDIT platfrom database instances and editing software tools, EDIT advanced data integrity checker</li> <li>JACQ data entry and management forms</li> <li>Terminology management tools (e.g. semantic media wiki)</li> </ul>					
	Data backup and archiving					
	Backup and archiving facilities of the BGBM and the Freie Universität Berlin					
	Objection     GBJF Data publisher     Data publisher					
	<ul> <li>Portal, service, and workflow interfaces of the EDIT Platform for Cybertaxonomy</li> <li>BioCASe technical interfacing and helpdesk</li> <li>Image Server, GPI/JSTOR Global Plants helpdesk</li> </ul>					
	User services	User services				
	EDIT Platform Workshops					
		BioCASe/Ope				
Service Levels	Data Set x	Data Package x	Data management x	Research Objects x		
Data Formats						
Data Submission Formats	Data Preferably via BGBM collection data form for <i>Botanical collections, DNA sample collections</i> and/or <i>Tissue collections</i> which can be found in the GFBio collection of recommended data submission templates and/or standardized formats of any kind (e.g. ABCD or DwC-A files); Spreadsheets (CSV, excel-files, image files); Export files from external EDIT platform installations					
	Metadata					
Data Accessibility	Public access points	ccess				
	Standardised exchange formats	d XML-files in ABCD, DarwinCore, EML, SDD standard; Web services of the EDIT Platform for Cybertaxonomy				
	Data formats	Data formats TXT, CSV, XML				
	Long-term availability					
Data Publication		Data Citation         Yes (DOI and citation for each individual data set)           Doi:         Dia Citation				
Services	DOI	via GBIF publication				
Archiving (RAW- data ingest, data, nedia)	via ZB MED/DataCite publication					
Licenses / Terms of Use	Metadata/ Data	Creative Commons Zero (CC0) 1.0 (for annotations), Creative Commons Attribution Share-Alike (CC-BY-SA) 3.0 (for the herbarium scans)				
Documentation						
Computing center, external service provider						
name of the associated						

Backup

The data and files are copied and archived on the following schedule:

primary storage: on change and hourly incremental backups
 secondary storage: daily
 long-term archiving: daily

The primary storage for data is the curated storage level, consisting of relational databases and files. Copies, database dumps and backups are stored on secondary storage, which is hard disk-based and on servers other than the primary storage. For long-term archiving, the data is archived on tape. These tapes are stored with two identical copies at two different locations within the BGBM Datacenter and FU Berlin Computing Center ZEDAT.

## Your contact persons at BGBM

### Data curator

Katja Luther

#### **Technical contact**

Dominik Röpert

#### NFDI contact persons

• Anton Güntsch, David Fichtmüller





Do you have questions, feedback or need help?

Contact our Helpdesk for direct support.

