

The Myxomycetes



Myxomycetes ...

- have ca. 1,000 taxa world-wide
- form an own clade within the 'crown' of eucaryota
- are a special approach of life towards multi-cellular organisms
- inhabit all terrestrial ecosystems
- are major predators of bacteria (yeasts, algae, cyanobacteria)

The scientific community working on biodiversity of myxomycetes is ...

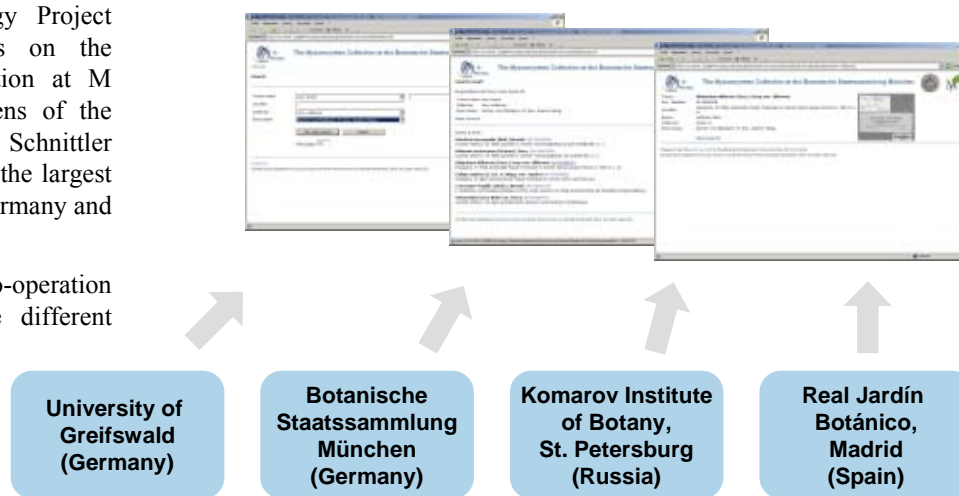
- scattered all over the world
- ca. 40 people only
- working in a few countries only →

Country	Academia / Research	Amateur
Brazil	1	
China	3–5	
Germany	1	7
India	2	
Japan	1	
Russia	1	5–10
Spain	5	
UK		2
USA	3	1

The GBIF-D Mycology Project “Myxomycetes Collection at M”

The activities of the GBIF-D Mycology Project “Myxomycetes collection at M” focus on the digitalization of the myxomycete collection at M which comprises the ca. 2,500 specimens of the general herbarium and the collection of M. Schnittler with ca. 10,000 specimens. Therewith it is the largest collection of plasmodial slime moulds in Germany and includes about 40% of the known taxa.

As a result of our database efforts, a co-operation among four research institutes in three different countries has been initiated:



► To facilitate inter-operability and data exchange between different institutes the pre-existing *Diversity Workbench* database modules were modified thus accommodating information unique to myxomycete collections. This aspect was developed with Y. K. Novozhilov (St. Petersburg).

► The taxonomic database NOMENMYX with 5,000 names for 800 taxa was developed by C. Lado (Madrid). It was integrated into the *Diversity Workbench* module *DiversityTaxonNames_Myxomycetes* and now forms the essential backbone for taxon names of plasmodial slime moulds.

Total outcome: 12,500 specimens digitized

The GBIF-DIGIT Seed Money Project “Linking Local Databases for Myxomycete Collections”

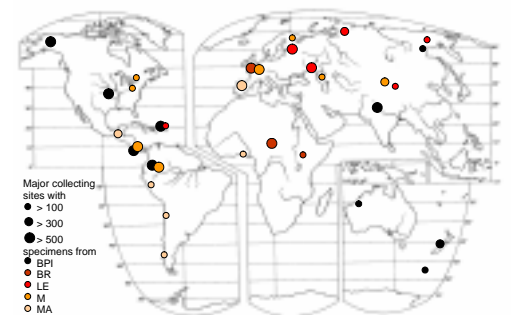
Project Partner	Belgium	Germany	Russia	Spain	USA	Total
Specimens						
Currently databased	16,000	*7,200	5,600	12,000	12,000	53,400
Funding secured for Databased through GBIF-DIGIT		*5,300	1,000	1,000	7,000	14,800
		7,500	5,400	3,000	7,700	23,600
Total outcome	16,000	20,000	12,000	16,000	26,700	91,300
Number of types	~ 150	~ 15	4	~ 25	~ 75	~ 275
Additional activities	descriptive specimen data	literature database	descriptive specimen data	nomenclatural standard	descriptive specimen data	

* through GBIF-D Mycology Project “Myxomycetes Collection at M”

In Germany, database activities of the “Linking Local Databases for Myxomycete Collections” focus on the internationally important collection of H. Neubert. His monograph on German and Austrian myxomycetes currently represents one of the most appraised works on myxomycetes (Neubert et al. 1993, 1995, 2000). After his death, M inherited his significant collection in December 2003.

Total outcome: 7,500 specimens digitized

Beginning in 2005, the Project “Linking Local Databases for Myxomycete Collections” will be supported by a grant of GBIF international (DIGIT program). M. Schnittler (Greifswald, Germany) is the co-ordination manager of this project, which includes the following five major herbaria:

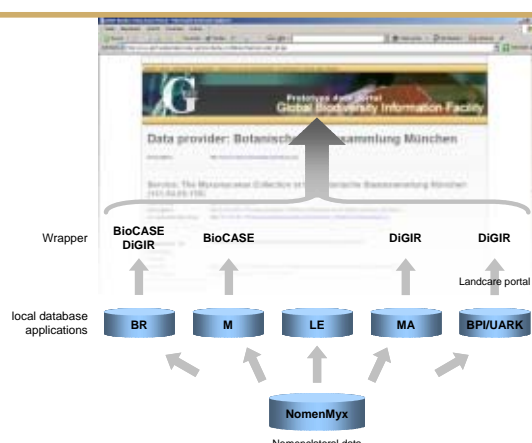


Regions represented by significant (> 100 specimens) myxomycete collections whose information will be made accessible by this project. The size of the dots is an estimate for the contributed number of specimens, colours indicate the responsible project partner.

Data Supply to GBIF

As the result of the GBIF-D project and the GBIF DIGIT project, Germany will offer data of myxomycete collections which will together comprise detailed information for **more than 20,000 specimens**.

All specimen information will be accessible to the international GBIF framework via the BioCASE wrapper.



Perspectives and Goals for the Future ...

For the following months several additional activities are planned:

- Within the framework of GBIF-D Mycology published checklist data for German myxomycetes will be made available via the internet.
- A database with keyworded references on ca. 3,500 published papers on taxonomy, distribution, and ecology of Myxomycetes will be presented.

In the future we hope to continue our work on important technical and scientific aspects of data interoperability and analysis for this ecologically important group of organisms.