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

The Myxomycete Project – International Cooperation for Data Supply to GBIF

M. Schnittler1, C. Lado2, Y. K. Novozhilov3, M. Weiss4, D. Triebel4

1 Botanisches Institut und Botanischer Garten, Ernst-Moritz-Arndt Universität Greifswald, Germany
2 Real Jardín Botánico, Madrid, Spain
3 V. L. Komarov Institute of Botany, Russian Academy of Sciences Laboratory for Systematics and Geography of Fungi, Prof. Popov Street, St. Petersburg, Russia
4 Botanische Staatssammlung München, Menzlinger Straße 67, 80638 München

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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:

University of Greifswald (Germany)
Botanische Staatssammlung München (Germany)
Komarov Institute of Botany, St. Petersburg (Russia)
Real Jardín Botánico, Madrid (Spain)

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-D Mycology Project “Myxomycetes Collection at M”

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In Germany, database activities of the “Linking Local Databases for Myxomycetes 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.

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Total outcome: 7,500 specimens digitized

Data Supply to GBIF

As the result of the GBIF-D project and the GBIF DIGIT project, Germany will offer data of myxomycetes 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.

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

Brazil
China
Germany
India
Japan
Russia
Spain
UK
USA

UNITED NATIONS OFFICE FOR THE COORDINATION OF HUMANITARIAN AFFAIRS

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.