



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE 4794

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at Dipartimento di Scienze e Politiche Ambientali

Scientist- in - charge: Prof. Gentile Francesco Ficetola

**Máté Vass**

## CURRICULUM VITAE

### PERSONAL INFORMATION

Surname	Vass
Name	Máté
Date of birth	23.09.1990

### PRESENT OCCUPATION

Appointment	Structure
Unemployed	-

### EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	BSc in Environmental Science	University Pannonia of	2013
Master	MSc in Environmental Science	University Pannonia of	2015
PhD	PhD in Biology with specialisation in Limnology	Uppsala University	2020

### REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date registration	of Association	City
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## FOREIGN LANGUAGES

Languages	level of knowledge
Hungarian	Native
English	Fluent
Swedish	Beginner

## AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2019	'Best in Microbiology' prize by Freshwater Biology Journal at the 6th Fresh Blood for Fresh Water Conference
2018	Research grant from Malméns Foundation Project: "Temperature- and dispersal-dependent priority effects in aquatic bacterial communities." (334,000 SEK)
2014	Campus Hungary Scholarship by Balassa Institute for doing an Internship in Berlin, Germany
2013	Pro Scientia Gold Medal

## TRAINING OR RESEARCH ACTIVITY

I am an environmental scientist and microbial ecologist, and received my PhD degree in Biology with specialization in limnology from Uppsala University. My research topics cover a spectrum of microbial organisms and their communities:

- Metacommunity ecology
- Quantification of community assembly processes with special focus on historical contingency (e.g. due to priority effects)
- Fungal biodiversity in aquatic habitats (streams and water-filled tree holes)
- Dispersal mechanisms of microfungi

During my doctoral study I investigated how aquatic microbial metacommunities assemble through time and space, and how historical processes may have a long-lasting influence (the so-called historical contingency) on the diversity of aquatic microbial metacommunities. There was a special focus on priority effects which is based on the 'first comes, first served' principle. Through my research projects, I have gained experience in conducting field samplings, mesocosm and laboratory experiments that, overall, aimed to investigate the community assembly of bacterial and microeukaryotic communities through time and space.

During my undergraduate studies, I have worked with aquatic fungi in streams and other microfungi (phylloplane and airborne) that may end up in water-filled tree holes. My interests in the role of fungi in litter decomposition, the diverse fungal communities in water-filled tree holes and the dispersal pathways of microfungi eventually shifted my focus towards the processes that drive community assembly and dynamics.

Assessing changes in biodiversity and communities, identifying the underlying mechanisms and estimating their relative importance can be challenging, especially when the available statistical 'toolbox' comprises a wide range of methods. However, I found working with complex data (in R) is the most exciting and interesting task during the previous years. My statistical skills cover a wide range of approaches from traditional methods (e.g. variation partitioning) to null-model approaches, from univariate to multivariate statistics.

Besides my research activities, I participated in several courses as teacher during my academic years. I



was an assistant teacher at the Uppsala University (Academic Teaching certificate; obtained in 2018) in the following courses: Limnology, The diversity and evolution of organisms, Aquatic ecosystem, Microbiology with infection biology, Water conservation, Aquatic ecosystem and ecosystem services.

I am also contributing to science as reviewer for several scientific journals such as Molecular Ecology, Environmental Microbiology, FEMS Microbiology Ecology, The ISME Journal, Microbiome, Freshwater Biology, Hydrobiologia, Applied and Environmental Microbiology.

## PROJECT ACTIVITY

Year	Project
2015-2020	PhD project - Bound to the past: Historical contingency in aquatic microbial metacommunities; conducted field campaign, mesocosm and laboratory experiments.
2018	URBAL ALGAE - Ecological status and the perception of ecosystem services of urban ponds, participation in a Europe-wide project
2014	Fieldwork assistant during my internship in the MycoLink (Linking aquatic fungal diversity to ecosystem function) project in Berlin
2014-2015	Microfungi in water-filled tree holes, the dispersal strategies of microfungi as part of my Master thesis
2012-2013	Investigation of the effect of red-sludge catastrophe on aquatic fungal communities (Thesis project)

## PATENTS

Patent
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## CONGRESSES AND SEMINARS

Date	Title	Place
2019	Warmer climate, not so warm welcome: temperature- and dispersal-dependent priority effects in aquatic bacterial communities	SAME16 Meeting, Potsdam, Germany (talk)
2019	Bacterioplankton and microeukaryotic metacommunities in shifting environment	OIKOS Meeting, Uppsala, Sweden (poster)
2018	Different community assembly dynamics in bacterial and microeukaryotic metacommunities	ISME Meeting, Leipzig, Germany (poster)
2016	Changes in community composition through time and space: how important is the legacy of past environmental conditions?	Hjort Summer School in Microbial Oceanography, Bergen, Norway (poster)

## PUBLICATIONS

Books
D. Magyar, M. Vass and D-W. Li (2016): Dispersal strategies of microfungi. In: Biology of microfungi (ed): D.-W. Li., Fungal Biology Series, Springer International Publishing, p. 315-371.



Vass, M. (2020). Bound to the past: Historical contingency in aquatic microbial metacommunities (Doctoral dissertation, Acta Universitatis Upsaliensis).

Articles in reviews

Máté Vass, Anna J. Székely, Eva S. Lindström, Omneya A. Osman, Silke Langenheder: Warming mediates the resistance of aquatic bacteria to invasion during community coalescence. *Molecular Ecology* (*under revision*)

Máté Vass, Anna J. Székely, Eva S. Lindström, Silke Langenheder (2020): Using null models to compare bacterial and microeukaryotic metacommunity assembly under shifting environmental conditions. *Scientific Reports* 10: 2455

Beáta Szabó, Edina Lengyel, Judit Padisák, Máté Vass and Csilla Stenger-Kovács (2018): Structuring forces and  $\beta$ -diversity of benthic diatom metacommunities in soda pans of the Carpathian Basin. *European Journal of Phycology* 53(2): 219-229.

Donát Magyar, Máté Vass and Gyula Oros (2017): Dendrotelmata (water-filled tree holes) as fungal hotspots - a long term study. *Cryptogamie, Mycologie* 38(1): 55-66.

Máté Vass, Silke Langenheder (2017): The legacy of the past - effects of historical processes on microbial metacommunities. *Aquatic Microbial Ecology* 79(1): 13-19.

K. E. Hubai, T. Kucserka, K. Karádi-Kovács, M. Vass, Á. Kósa, M. Honti, J. Padisák (2017): Decoupling shredder activity and physical abrasion in leaf litter decomposition process: experiments in the Torna-stream (Hungary) affected by red sludge spill. *Hydrobiologia* 785: 233-248.

Máté Vass, Ágnes Révay, Tamás Kucserka, Katalin Hubai, Viktória Üveges, Kata Kovács and Judit Padisák (2013): Aquatic hyphomycetes as survivors and/or first colonizers after a red sludge disaster in the Torna stream, Hungary. *International Review of Hydrobiology* 98: 217-224.

Kucserka T., Kovács K., Vass M., Selmečzy G. B., Hubai K. E., Üveges V., Kacsala I., Törő N., Padisák J. (2013): Leaf litter decomposition in Torna stream before and after a red mud disaster. *Acta Biologica Hungarica* 65(1): 96-106.

Congress proceedings

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OTHER INFORMATION

'B' driving license

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Place and date: Uppsala, 24/11/2020

SIGNATURE