

# Sofia J. van Moorsel

www.sofiavanmoorsel.com

Email: [sofia.vanmoorsel@mail.mcgill.ca](mailto:sofia.vanmoorsel@mail.mcgill.ca)

Department of Biology  
McGill University  
Stewart Biology Building  
1205 Dr. Penfield Ave, Montreal, QC  
Canada

Twitter: @sofiavanmoorsel  
OrcID: 0000-0003-1947-8971

## 1. Academic history

- 1/2019 – present      SNSF Postdoctoral fellow, Department of Biology, McGill University
- 3/2018 – present      Post-doc, Department of Biology, McGill University. Advisors: Prof. Dr. Andrew Gonzalez & Prof. Dr. Owen Petchey
- 11/2017 – 02/2018    Post-doc, Department of Evolutionary Biology and Environmental Studies, University of Zurich. Advisors: Prof. Dr. Bernhard Schmid & Prof. Dr. Owen Petchey
- 3/2015 – 10/2017    PhD, Department for Evolutionary Biology and Environmental Studies, University of Zurich. Supervisor: Prof. Dr. Bernhard Schmid
- 9/2013 – 2/2015      MSc in Biology/Microbiology, University of Zurich
- 9/2010 – 12/2013    BSc Biology, University of Zurich, focus on subjects in Ecology, Evolution and Limnology

## 2. Research experience (for a detailed description see p. 6)

- 7/2013 – 10/2017    PhD thesis at Life Science Zurich Graduate School, University of Zurich, Switzerland, Advisor: Prof. Dr. Bernhard Schmid  
Title of thesis: Community evolution increases ecosystem functioning and stability.
- 3/2012 – 3/2013      Master thesis, Federal Institute of Aquatic Science and Technology (EAWAG), Dübendorf, Switzerland  
Advisors: Dr. David Johnson and Prof. Dr. Martin Ackermann  
Title of thesis: High-throughput analysis of metabolic incompatibilities in *E. coli*.

## 3. Publications

### ***Published***

Schmid, M.W.\* , Hahl, T.\* , van Moorsel, S.J.\*, Wagg, C., De Deyn, G.B. and Schmid, B. Feedbacks of plant identity and diversity on the diversity and community composition of rhizosphere microbiomes from a long-term biodiversity experiment. \*equal contribution *Molecular Ecology*, in press

van Moorsel, S.J., Schmid, M.W., Hahl, T., Zuppinger-Dingley, D. & Schmid, B. (2018) Selection in response to community diversity alters plant performance and functional traits. *Perspectives in Plant Evolution Ecology and Systematics* 33:51–61.

van Moorsel, S.J. (2018) Personal Profile. *New Phytologist* 217:993–994.

van Moorsel, S.J.\* , Hahl, T.\* , Wagg, C., De Deyn, G.B, Flynn, D.F.B., Zuppinger-Dingley, D. and Schmid, B. (2018) Community evolution increases plant productivity at low diversity. *Ecology Letters* 21:128–137. \*equal contribution

Yamasaki, E., Altermatt, F., Cavender-Bares, J., Schuman, M., Zuppinger-Dingley, D., Garonna, I., Schneider, F., Guillén-Escribas, C., van Moorsel, S.J., Hahl, T., Schmid, B., Schaepman, M. and Shimizu, K. (2017) Integrating genomics for monitoring and predicting ecosystem response to global change: phenology, evolution and biodiversity. *Current Opinion in Environmental Sustainability* 29:177–186.

Svercel, M., Saladin, B., van Moorsel, S.J., Wolf, S. and Bagheri, H.C. (2011) Antagonistic interactions between filamentous heterotrophs and the cyanobacterium *Nostoc muscorum*. *BMC Research Notes* 4:357.

### ***Submitted but not yet accepted***

van Moorsel, S.J., Schmid, M.W., Wagemaker, N., van Gorp, T., Schmid, B. and Vergeer, P. Evidence of rapid genetic divergence in a grassland biodiversity experiment. (*Molecular Ecology*, in review)

### ***In preparation***

Hahl, T.\* , van Moorsel, S.J.\*, Schmid, M.W., Schmid, B. and Wagg, C. Diversity loss selects for altered plant phenotypic responses to local arbuscular mycorrhizal communities. \*equal contribution

van Moorsel, S.J., Hahl, T., Petchey, O.L., Ebeling A., Eisenhauer, N., Schmid, B. & Wagg, C. Evolution increases ecosystem temporal stability and recovery from a flood in grassland communities.

van Moorsel, S.J. \*, Schmid, M.W. \*, Hahl, T. \*, Wagg, C., de Deyn, G.B., Niklaus, P.A., Schmid, B.: Effects of plant-community and soil history on the relationship between plant and soil microbial diversity. \*equal contribution.

#### **4. Contributions to conferences, symposia and research seminars**

##### ***Oral presentations***

- 2018                      Biology18 conference, Neuchâtel, CH
- QCBS Symposium, Montréal, CA
- 2017                      British Society of Ecology (BES) annual meeting, Ghent, BEL
- 40<sup>th</sup> New Phytologist Symposium, Vienna, AT (selected speaker)
- Aquatic ecology & macroevolution seminar series, EAWAG Kastanienbaum, CH (invited speaker)
- Institute of Plant Sciences, University of Bern, CH (invited speaker)
- Biology17 conference, Bern, CH
- 2016                      British Society of Ecology (BES) annual meeting, Liverpool, UK
- BEEES Seminar at the University of Zurich, CH
- Ecological Society of America (ESA) annual meeting, Fort Lauderdale, USA
- 2015                      Ecological Society of America (ESA) annual meeting, Baltimore, USA
- epiGBS Symposium at the Radboud University, Nijmegen, NL
- 28<sup>th</sup> Plant Population Biology Conference, Tübingen, DE

##### ***Poster presentations***

- 2016                      Global Change and Biodiversity Conference, Monte Verità, CH
- Urban Ecology Symposium, Zürich, CH
- Biology16 conference, Lausanne, CH
- Symposium of the Zurich-Basel Plant Science Center, Zurich, CH
- 2014                      27<sup>th</sup> Plant Population Biology Conference, Konstanz, DE
- 33<sup>rd</sup> New Phytologist Symposium, Zurich, CH

#### **5. Awards and grants**

- 2018                      SNSF Early.Postdoc Mobility Fellowship (138'000 CAD)

- 2017                      Poster award at the New Phytologist Symposium (200 Euros)
- New Phytologist Trust Symposium Grant (520 Euros)
- Award for best student talk in the category Ecology & Physiology at the Biology17 conference in Bern (300 CHF)
- 2016                      Poster award at the Global Change and Biodiversity Conference in Monte Verità (250 CHF)
- SNF grant number 147092 awarded to Prof. Bernhard Schmid (Sofia van Moorsel contributed to the proposal writing)
- 2015                      Short visit travel grant from the ESF Congenomics Network (Reference number 7167, 1800 Euros)
- 2014                      Poster award at the PopBio Conference in Konstanz (120 Euros)

## 6. Teaching activities

- Exam corrections      Sustainability, ecology and conservation
- Evaluation                Student posters about environmental chemistry and microbiology  
                                 Student reports on internships in environmental sciences
- Teaching assistant      Undergraduate practicals on vegetation analyses

## 7. Personal skills

### **Languages**

German:                  Native proficiency  
 English:                 Full professional proficiency  
 Spanish:                 Professional working proficiency  
 French:                  Professional working proficiency  
 Dutch:                    Limited working proficiency

### **Digital competency**

Data and literature management	Literature search databases and citation tools (e.g. Zotero, Mendeley), Data Dryad, Pangaea
Programming languages / Computation	R
Illustration	Photoshop, Adobe Illustrator, Adobe Indesign Microsoft Office

### **Other**

PADI rescue diver, driving license

## 8. Coursework and training (partial selection)

- 2018                      Learning to Teach Day: 1-day workshop
- 2017                      Voice Training Course  
                                  Receiving and giving feedback workshop

Workshop on functional trait data analysis in Oldenburg, DE

- 2016 Urban Ecology Summer School in Horgen, CH  
Presentation Practice Course  
Scientific writing course  
Course on writing a postdoctoral grant  
Workshop in leadership skills  
Workshop on the Community ecology package ‘vegan’ in Liverpool, UK
- 2015 Scientific writing workshop in Wageningen, NL  
Mixed-effect modelling with Asreml
- 2013 Conservation management field course in Scotland, UK

## 9. Outreach activities

- 2018 “24 Heures de Sciences” Outreach event at the Gault Nature Reserve
- 2017 Participation in the “Science Lab - How researchers do their research”,  
Outreach activity targeted at primary and high-school students
- Workshop on Scientific Busking taught by David Price
- Rendez-vous Forschung. A public outreach event (“Scientific Speed-dating”) at the University of Bern.
- 2016 Science Info Days of the Faculty of Science at the University of Zurich.  
Oral presentation entitled “Microbes – the rulers of the world” for  
prospective students and their parents.
- 4<sup>th</sup> Zurich Science Days: Scientifica. Exhibition booth on light-emitting  
plant juices.
- Television report “Der Mix macht’s” about my project for a joint Swiss and  
German science television program (3Sat SRF Nano).

## 10. Memberships

British Ecological Society (BES), Canadian Society of Ecology and Evolution (CSEE), University Research Priority Program (URPP) Global Change and Biodiversity of the University of Zurich

## 11. Peer-reviewing activities

- 2018 – present Journal of Ecology (1 review)  
2018 – present Ecology and Evolution (1 review)  
2018 – present Oecologia (2 reviews)  
2017 – present Journal of Plant Ecology (3 reviews)

## 12. Other experience/volunteering

2018 – 2019	Organization of the weekly Departmental Discussion group (Journal club) about topics in Ecology and Evolution
2017	Session Chair at the BES Annual Meeting in Ghent
7/2013 – 3/2017	PhD representative at the Department of Evolutionary Biology and Environmental Studies
2016	Session Presider at the ESA Annual Meeting in Fort Lauderdale
2010	Volunteering at the Red Sea Environmental Center in Dahab, Egypt (Reef Monitoring, Survey of Fish, Invertebrates, Corals)

## 13. Detailed research experience

### Current position (03/2018 – present)

**Postdoctoral researcher** at the Department of Biology at McGill.

- Experimental design, set-up, coordination and management of a large multi-year aquatic mesocosm experiment
- Training and managing a small research team (4 undergraduate students, 1 MSc student)
- Rearing *Daphnia* populations in the greenhouse
- Sampling of phytoplankton, zooplankton, ecosystem metabolism, pH, temperature
- Coordinating and conducting eDNA and eRNA filtration campaigns
- Analysis and visualization of data collected in the field over 5 months
- Mentorship of undergraduate students
- Peer-reviewing (Journal of Plant Ecology, Oecologia, Ecology & Evolution)
- Outreach activities

### Previous position (11/2017 – present)

**Postdoctoral researcher** at the Department of Evolutionary Biology and Environmental Studies and the University Research Priority Program Global Change and Biodiversity

- Writing manuscripts and preparing them for submission
- Revisions of manuscripts
- Data analysis and visualization
- Technical assistance in collaborative projects
- Data dissemination (e.g. presenting at international conferences)

- Peer-reviewing
- Outreach activities

**Previous position (7/2013 – 10/2017)**

**PhD candidate** at the Department of Evolutionary Biology and Environmental Studies

- Collecting plant biomass and plant trait data in the field (Jena Experiment)
- Design of glasshouse pot experiments
- Planning and conducting glasshouse pot experiments
- Data collection (biomass, functional traits) in the glasshouse
- Soil DNA extraction and library preparation
- Data analysis (mixed-models) and visualization
- Manuscript writing and publishing
- Conference presentations (oral and poster)
- Research seminar presentations (oral)
- Coursework, workshops and summer schools
- Outreach activities and teaching