



2018 – a retrospection

2018 was a great year for our group that started with the exciting task of finding our new team members aka technicians to support Robert's project and the transparent soil project. The interviews went very well and Ise and Sandra started in April, while Leia finished her apprenticeship and joined us in July. Furthermore, we expanded our social media presence to twitter (@SimonLab_PIE). With regards to research, projects continued and new projects started in 2018. Inna started her Bachelor project in spring for which she setup our new microdialysis system. Throughout the year, several student assistants joined the group for short- or long-term support to help with preparations for experiments and harvests. Thus, a big thank you goes to Yannick Albrecht, Steffi Dörr, Donard Geci, Inna Koleber, Lisa Lichtenstern, Sophie Mast, Manuela Spagnuolo, Franziska Spanner, Benedikt Speißer, Aileen Trost, and Alissa Wilhalm. Furthermore, Marina who came to us first in 2016 for a one-week school internship and returned in 2017 has finally started studying at the University of Konstanz and will join our group in January 2019 as a long-term student assistant.

For Robert's project, the year started with a shock on the first day back in the lab when we realised that a huge tree had fallen in our forest plot in the storm during the holiday season. Luckily it had fallen away from the mesocosms and instead crushed into the fence. In February, Robert set up camera traps to find out who was checking on the mesocosms on a regular basis as he noticed tracks in the snow. Apparently, foxes came by during the night. In March / April, the first harvest was conducted followed by three further harvests over the course of the year, with the last one in September. As this experiment has been a tremendous work effort for everyone involved, special thanks go to Sophie and Manu who supported this work with their Bachelor thesis projects from May to August and also to TJ – our awesome "Maultaschen"-loving intern from Canada who stayed with us from June to August.

The project to develop new transparent soil microcosms for live assessment of competition in the rhizosphere started with ordering lots of seeds of various woody species and also refreshing our microscopy skills. Ise went to Southampton, UK, for an advanced microscopy workshop (May), Judy participated in the EMBL workshop on widefield and confocal microscopy in Heidelberg, Germany (June), and Leia went to Tulln, Austria (November) to learn about plant-microbe interactions microscopy. The highlight for this project, however, was our visit to our collaboration partner Lionel Dupuy and his group at the James Hutton Institute in Dundee, Scotland, UK. A week filled with meeting experts in rhizosphere research, learning new methodology and enjoying Dundee.

We were also active outside the lab and office, presenting our work at the Forstwissenschaftliche Tagung in Göttingen, Germany (September), the Joint Annual Meeting of the BES in Birmingham, UK (December), and the Annual Meeting of the American Society of Plant Biologists in Montréal, Canada, for which Judy was invited to give a talk at the meeting of the section Environmental Ecological Plant Physiology.

As for planning new projects, Judy went to Leipzig to meet with colleagues (February) and to Hainich national park to check out future field sites (May). Judy launched her new course on "getting ready for the Bachelor thesis" in March which was so well received that a second group had to be opened. Judy also supported the Faculty as equal opportunities officer from April to September. In October, she participated in "scienceathon" – a five-day celebration of science during which scientists shared the ups and downs of life as a scientist by posting photos on social media. Robert expanded his ecophysiology skills at the plant ecophysiology workshop in Lissabon, Portugal, in September. Making use of the remaining time as well as possible, we published 1 review article, and 3 original research articles including Andrea's first paper from

her PhD. The group was also in the news of the University of Konstanz with an article on “visualizing belowground competition between trees” and in the autumn bulletin of EURESEARCH with a 2page editorial on “Getting to the roots of forest sustainability” (find links here <http://www.plantinteractionsecophysiology.com/in-the-media/>). For winter, Sabine Deviche from Deviche Designs drew up a winter version of our group comic:



We also celebrated a lot this past year: Inna’s, Sophie’s, and Manu’s Bachelor projects (All of them did very well and we wish them all the best for their Master studies), TJ’s support during summer as an intern, Andrea’s 2nd place for her poster on “Competition for N between native trees and an introduced grass in the subtropics” at the Graduate School Biological Sciences Awards in July, the end of the year with a lovely brunch with lots of great food, although not as much as we had for our summer excursion with mini-golf, swimming in Lake Konstanz, and the subsequent BBQ, and last but not least, the move to our newly renovated lab in November.

So, apart from presenting our work at conferences, learning new methods, setting up the new lab, and being updated on the current status in our field of research, our main accomplishment was the gigantic experiment in the forest: The 4,900 tree seedlings planted into c. 700 mesocosms filled with over 21,000 kg of sand/vermiculite in December 2017, were more or less “harvested” (some did not make it through summer). Analysing the nearly 3000 samples for various metabolites will be a major task for 2019. Overall, 2018 was a very good year for us and we have a lot planned for 2019. The group will continue to grow with the start of new projects. Thus, if you are interested in our work and/or would like to join us, check out our website to stay updated.