

Editorial Vol 2, Issue 3 (2021)

César Marín^{1*} and Marcel G.A. van der Heijden^{2, 3}

¹Department of Mycorrhizal Symbioses, Institute of Botany, Czech Academy of Sciences, Czech Republic. ²Agroscope, Switzerland. ³Department of Plant and Microbial Biology, University of Zurich, Switzerland. *E-mail: cesar.marin@postgrado.uach.cl

We are very delighted to release our sixth Newsletter (Vol. 2, Issue 3) of the International Mycorrhiza Society (IMS). After six issues, we are happy with the result, as it has encouraged many researchers in all stages to share their mycorrhizal research, as well as it has expanded the communication within and outside the IMS, being an important source of mycorrhizal research outreach. We would like to thank all the mycorrhizal researchers who have contributed with votes, short articles, YouTube interviews, and events/jobs advertising to our Newsletter. Also, many thanks to our Executive, Board of Directors, to the South American Mycorrhizal Research Network, and to the Topic Editors. We encourage our readers to please continue giving feedback, suggestions, and/or advice in order to improve our content.

Call for Topic Editor: dear all, in addition to the current topics our Newsletter touches (Ecology, Evolution, Molecular biology), we are looking for a mycorrhizal Applications Editor. If you have interest and experience in the applications of mycorrhizal research (agriculture, forestry, remediation, etc), please contact César Marín (cesar.marin@postgrado.uach.cl). Your duties will be to coordinate articles in this research area (approach researchers to write a short article and/or approach them for being interviewed about their recent mycorrhizal work), promote the

IMS Newsletter, and you can vote for the top 10 mycorrhiza papers.

Top Ten Mycorrhizal articles

In this issue, we present our list of the Top 10 mycorrhizal articles for the last four months (May to August, 2021). Many congratulations to Ylva Lekberg and colleagues for the first rank with their paper entitled “Nitrogen and phosphorus fertilization consistently favor pathogenic over mutualistic fungi in grassland soils” (*Nat Commun*). They demonstrate that N and P addition to 25 grasslands around the globe promotes the relative abundance of fungal pathogens, suppresses mycorrhiza, but does not affect saprotrophic fungi. Further highlights on this list include work by Clemmensen *et al.* (2021) in *Ecol Lett* (rank 2) demonstrating that there are tipping points in carbon storage when forests expand into tundra, and that this is related to ectomycorrhizal fungi contributing to decomposition when mining N from organic matter. The No. 3 article by Rich *et al.* (2021) in *Science* postulated how AMF helped recently evolved terrestrial plants with their adaptation to increased ultraviolet light exposure, desiccation, and less accessible nutrients.

Short Research articles on mycorrhizas, tree survival, and a changing world

This issue also contains two short research articles/commentaries about

different issues. The topics include the mutualism to parasitism continuum under different soil nutrient conditions (by Ylva Lekberg and Lauren Waller; No. 1 in our Top 10 vote), and the effects of mycorrhizal fungi and networks on large trees survival and their resistance to native pests and pathogens (by Sara J Germain and James A Lutz). This issue also includes three YouTube interviews, one with Mathu Malar on the genome of *Geosiphon pyriformis* and the emergence of the AM symbiosis, other with Aidee Guzman on how crop diversity enriches AMF communities in California (article No. 9 in our Top 10 vote), and the last one with Laura Martinez-Suz on ectomycorrhizas, forest recovery, and tipping points. The Tools section provides short commentaries to methods on molecular community ecology of AMF, modeling tools, and pharmaceuticals removal using AMF. In the events section we highlight conferences and meetings linked to mycorrhizal research. We also highlight a recent special issue in *Plants, People, Planet* regarding mycorrhizas in a changing world. Please do contact us if you have useful information that you wish to be mentioned in the “Tools” or “Events” sections, or other special announcements about mycorrhiza.



Registration for ICOM11 in Beijing

Please do register and schedule for the next meeting of the International Mycorrhiza Society (ICOM11), which is scheduled next year (31 July – 5 August, 2022) in Beijing, China. It is not fully clear yet whether this will be an on-site meeting or a mix of on-line and on-site. This will be announced until the end of the year. Also, the scientific program for ICOM11 is being finalised and will be announced the coming month.