

International Virtual Workshop " Building a mycorrhizal traits database for South America"
November 8 to 12, 2021

Workshop Summary Report
Submitted by Jessica Duchicela
ISME Ambassador, Ecuador.

Mycorrhizal fungi are critical members of the plant microbiome. They directly interact with plants and promote their growth. Our understanding of the nature and diversity of mycorrhizal symbiosis at large scales is based on globally accessible individual studies (mostly in English), which are often compiled in "global" mycorrhizal trait databases. However, these compilations lack local and regional scientific sources and perspectives, limiting the assimilation of regional scientific knowledge and expertises. Regional collaborative efforts, based on scientific inclusive initiatives, can cope with language and information accessibility limitations and account for regional expertise to perform best-informed data reliability assessments and integration of the geographical and environmental information.

In this context, on November 8 to 12, 2021, the Virtual Workshop " Building a mycorrhizal traits database for South America" took place virtually. It was hosted by Universidad de las Fuerzas Armadas ESPE, Ecuador. The workshop aims were: 1) to encourage synthesis of local reference databases to support testing of ecological generalities that govern mycorrhizal functioning in South American 'ecosystems. And 2) to expand the existing databases, while also expanding the mycorrhizal traits to include a broader array of benefits. The Scientific Committee members Jessica Duchicela Universidad de las Fuerzas Armadas ESPE - Ecuador Patricia Silva-Flores Universidad Católica de Maule - Chile, María Isabel Mujica Pontificia Universidad Católica - Chile and Guillermo Bueno Universidad de Tartu, Estonia arranged a series of keynote speakers followed by networking and discussion session in order to defined a conceptual framework to systematically review and collect mycorrhizal information generated in South America, discussed the core set of mycorrhizal traits to collect, expanded the scope of biogeographical data through data standardization, implemented data quality checks and the finding of historical observations in all regional scientific languages and databases (gray literature).

The ISME supported workshop was a dedicated capacity building workshop intended for promoting microbial ecology research throughout South America. This workshop provided a platform and had participation of 80 researchers at different stages of their career and the leading experts encompassing different areas of mycorrhizal ecology in South America. The participants were from different geographical corners of the continent, or had performed research in South America biomes in the last 50 years, and represented a number of academic institutions. The call for participation was focused to ensure fair representation of gender, career stage, and geography.

During the five-days workshop, participants received a blend of keynote sessions supported by lectures and mycorrhiza traits focused discussions. The networking and discussion sessions were interactive with plenty of questions discussed between the participants and experts. The workshop achieved two main results: First, the workshop provided up-to-date training and instruction and completing the course gave attendees both knowledge and credibility. Upon conclusion, each participant received a Certificate of Completion for 20 hours of instruction. And second, the workshop achieved to form a grass-root collaborative initiative aimed to develop a regional reference database for South America to support testing of ecological generalities that govern mycorrhizal functioning in South American 'ecosystems, and to aid in creating more complete, open and inclusive global databases. The project completed a list of researchers engaged in gathering and validation of the data during following stages of the database assembly. We did not charge registration or membership fees to attend thanks to the generous sponsorship from ISME.

A copy of the workshop programme is appended to this report. The event was a great success and we

once again appreciate the ongoing support from ISME. The ongoing success of the workshop demonstrates the vibrant and broad microbial ecology community in South America.



The MycoDB database: Approaches to meta-analysis, and opportunities for expansion going forward

Jason D. Hoeksema
Department of Biology
University of Mississippi

Why do we need a mycorrhizal database from South America?

Mycorrhizal plant response

Soil aggregate stability

Jéssica Duchicela, PhD
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CERTIFICATE OF PARTICIPATION

Presented to

Romel Chiriboga Morocho

At the International Virtual Workshop "Building a mycorrhizal traits database for South America" organized by Universidad de Las Fuerzas Armadas – ESPE.

November 8 to 12, 2021 (20 Hours)



Tom. de EM. Héctor F. Yépez M., Mgtr.
Director of Life Science Department
Universidad de las Fuerzas Armadas-ESPE



Jéssica Duchicela, Ph.D.
Organizer & Scientific Committee of the Symposium
Universidad de las Fuerzas Armadas-ESPE





SPEAKER CERTIFICATE

Presented to

V. Bala Chaudhary

For the presentation entitled: "The origin of MycoDB how (and why) to build a mycorrhizal database", at the International Virtual Workshop "Building a mycorrhizal traits database for South America" organized by Universidad de Las Fuerzas Armadas – ESPE.

November 8 to 12, 2021.



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