Postdoctoral Research Associate *in the* Plant-Soil Interactions Group
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Education and Training

2022	University of Zürich, Plant Sciences, Dr. Sc. Nat. (PhD) with Pascal A. Niklaus "Resource Exchange and Partner Choice in the Plant–AMF Symbiosis"
2017	University of California, Riverside, Plant Biology, M.S.
2014	University of Central Florida, Biology *summa cum laude*, B.S.

Academic Appointments

2022-Present	Postdoctoral Research Associate, PI: Dr. Iversen, Oak Ridge National Laboratory
2018-2022	Doctoral Candidate, Global Change & Soil Ecology Group, University of Zürich
2017-2018	Laboratory Manager, Spasojevic Lab, University of California, Riverside
2014-2017	Master's Student, Diez & Allen Labs, University of California, Riverside
2011-2014	Student Researcher, Von Holle & Hoffman Labs, University of Central Florida

Funding

1. "Terrestrial Ecosystem Science - Scientific Focus Area". Earth and Environmental Systems Sciences Program, Biological and Environmental Research, Office of Science, US DOE. 2023. USD 41.5 million. PI: Dr.s Paul J. Hanson and Daniel M. Ricciuto. *1 of 23 contributors*.
2. "The elusive structure and function of peatland fine roots". Environmental Transformations and Interactions, Environmental Molecular Sciences Laboratory (Pacific Northwest National Laboratory). User Facility Exploratory Research Call. 2023. Equipment time and Technician expertise & labor. PI: Dr. Avni Malhotra. Participants: **Dr. Sören Weber**, Dr. Bram WG Stone.
3. "Trade dynamics in the symbiosis between plants and arbuscular mycorrhizal fungi". Forschungskredit Candoc, University of Zürich. CHF 28,773. 2021. PI: **Sören Eliot Weber**, Pascal A. Niklaus.
4. National Science Foundation – Research Experience for Undergraduates. USD 4,500. 2013. *As part of* National Science Foundation Grant No. 0922457 University of Texas
5. Research and Mentoring Program (RAMP), *internal program at* University of Central Florida. USD 5,600. 2012-2014. PI's: 2012-2013 Betsy Von Holle; 2013-2014 Eric Hoffman.

Publications (Google Scholar: 276 citations, h-index: 7; Scopus: 215 citations, h-index: 6)

1. Plant choice between arbuscular mycorrhizal fungal species results in increased plant P acquisition. **Sören Eliot Weber**, Jordi Bascompte, Ansgar Kahmen, Pascal A. Niklaus. PLoS ONE 19(1): e0292811. 2024. https://doi.org/10.1371/journal.pone.0292811
2. How deep should we go to understand roots at the top of the world? **Weber SE**, Iversen CM. New Phytologist 240: *457-460*, 2023. https://doi.org/10.1111/nph.19220
3. Plant functional traits are dynamic predictors of ecosystem functioning in variable environments. Huxley, Jared D., Caitlin T. White, Hope C. Humphries, **Sören E. Weber**, Marko J. Spasojevic. Journal of Ecology. 111: *2597-2613*, 2023 https://doi.org/10.1111/1365-2745.14197
4. Variation in $\delta^{13}C$ and $\delta^{15}N$ within and among plant species in the alpine tundra. Spasojevic, Marko J. & **Sören Weber**. Arctic, Antarctic, and Alpine Research, 53:1, *340-351*, 2021
5. Belowground impacts of alpine woody encroachment are determined by plant traits, local climate, and soil conditions. Collins, Courtney G., Marko J. Spasojevic, Concepción L. Alados, Emma L. Aronson, Juan C. Benavides, Nicoletta Cannone, Chatrina Caviezel, Oriol Grau, Hui Guo, Gaku Kudo, Nikolas J. Kuhn, Jana Müllerová, Michala L. Phillips, Nuttapon Pombubpa, Frédérique Reverchon, Hannah B. Shulman, Jason E. Stajich, Alexia Stokes, **Sören E. Weber**, Jeffrey M. Diez. Global Change Biology, 26:12, *7112—7127*, 2020

6. Plant biomass, not plant economics traits, determines responses of soil CO2 efflux to precipitation in the C4 grass Panicum virgatum. Heckman, Robert W, Albina R Khasanova, Nicholas S Johnson, **Sören Weber**, Jason E Bonnette, Michael J Aspinwall, Lara G Reichmann, Thomas E Juenger, Philip A Fay, Christine V Hawkes. Journal of Ecology, 108:5, *2095—2106*, 2020
7. The influence of warming and biotic interactions on the potential for range expansion of native and nonnative species. Von Holle, Betsy, **Sören E Weber**, David M Nickerson, AoB Plants,12:5, *plaa040*, 2020
8. Fungal community assembly in soils and roots under plant invasion and nitrogen deposition. Phillips, Michala L, **Sören E Weber**, Lela V Andrews, Emma L Aronson, Michael F Allen, Edith B Allen, Fungal Ecology, 40, *107—117*, 2019
9. Responses of arbuscular mycorrhizal fungi to multiple coinciding global change drivers. Weber, Sören Eliot, Jeffrey M Diez, Lela V Andrews, Michael L Goulden, Emma L Aronson, Michael F Allen, Fungal Ecology, 40, 62—71, 2019
10. Shrub range expansion alters diversity and distribution of soil fungal communities across an alpine elevation gradient. Collins, Courtney G, Jason E Stajich, **Sören E Weber**, Nuttapon Pombubpa, Jeffrey M Diez, Molecular Ecology, 27, 10, *2461—2476*, 2018

Submitted publications

1. The fate of peatland carbon interactively determined by elevated carbon dioxide and warming. Jian Zhou, Wenjuan Huang, Paul Hanson, Daniel Ricciuto, Melanie Mayes, Natalie Griffiths, Verity Salmon, **Sören Weber**, Lifen Jiang, Yu Zhou, Quan Quan, Xiaoying Shi, Weinan Chen, Yahai Zhang. *Submitted to Nature.*

Publications in active preparation

1. AMF diversity promotes plant phosphorus acquisition and reduces carbon costs per unit of phosphorus. **Sören Eliot Weber**, Jordi Bascompte, Marcel van der Heijden, Ansgar Kahmen, Pascal A. Niklaus. *Submitting to New Phytologist.*
2. Boreal peatland plant roots do not grow deeper with warming nor elevated CO_2. **Sören Eliot Weber**, Joanne Childs, John Latimer, Colleen Marie Iversen. *Submitting to Global Change Biology.*

Non-Peer Reviewed Datasets

1. Niwot plant functional traits, 2008 - 2018. Spasojevic, M., **S. Weber**, and Niwot Ridge LTER. Environmental Data Initiative. https://doi.org/10.6073/pasta/1a06bcffa07e7aa2a4b674af4c427860 2022.
2. SPRUCE Plant-Available Nutrients Assessed with Ion-Exchange Resins in Experimental Plots, Beginning in 2013. Iversen CM, Latimer J, Burnham A, Brice DJ, Childs J, Vander Stel HM, Schwaner GW, **Weber SE**. Oak Ridge National Laboratory, TES SFA, U.S. Department of Energy, Oak Ridge, Tennessee, U.S.A. http://dx.doi.org/10.3334/CDIAC/spruce.036 2017.

Teaching Experience

1. Data Analysis in Biology, BIO144, University of Zürich
   2019-2021 (3 times)
   Frequent interactions with students, facilitating their analytical exercises and working through examples, proctored exams
2. Contemporary Analysis for Ecology, UWW271, University of Zürich
   2020 Fall
   Lead a lecture on model fitting and the construction of linear model matrices, facilitated exercises by working through examples, proctored final exam
3. Introduction to Organismal Biology Laboratory, BIOL5B, University of California, Riverside
   2015-2017 (3 times)

Gave short lecture at beginning of laboratory sessions, lead students through laboratory exercises, voluntarily lead study sessions in advance of exams, proctored exams

Invited Talks

1. Plant Roots in Boreal Peatlands Under Whole-Ecosystem Warming and Elevated CO_2 Track Nutrients, Not Water. **S.E. Weber**, J. Childs, J. Latimer, C.M. Iversen. Environmental System Science Program (DOE) Principal Investigator Meeting. Bethesda, MD USA. May 2023
2. Chthonic Connections: Plant Roots, Mycorrhizal Fungi & Ecosystem Processes. **S.E. Weber**. University of Georgia, Plant Biology Seminar. Athens, GA USA. February 2023
3. Dirty Relationships with Fungi: The Arbuscular Mycorrhizal Symbiosis. **Weber, Sören**. Zürich Interaction Seminar UZH-ETH. Zürich ZH, CH. April 2019.
4. Diversity and trade in the arbuscular mycorrhizal symbiosis. **Weber, Sören**. University of Basel. Basel BS, CH. April 2019
5. Wildlands to the Garden: Invasive Plants, Habitat Restoration, and Conservation. Amanda Swanson, **Sören Weber**. Master Gardener Symposium. Riverside, CA USA. April 2015

Contributed presentations (posters indicated with*, otherwise talks)

1. Boreal plant roots do not grow deeper to take advantage of depressed water tables. **S.E. Weber**, J. Childs, G. Schwaner, C.M. Iversen. Talk. New Phytologist Next Generation Scientists 2024 Symposium. Durham, NC USA. June 2024
2. *Greater Shrub Root Production Under Warming and Elevated CO2 Is Not Distributed More Deeply. **S.E. Weber**, J. Childs, G. C.M. Iversen. Poster. Environmental System Science Program (DOE) Principal Investigator Meeting. Reston, VA USA April 2024
3. Plant roots in boreal peatlands under whole-ecosystem warming and elevated CO2 track nutrients, not water. **S.E. Weber**, J. Childs, J. Latimer, C.M. Iversen. Talk. Annual Meeting of the Ecological Society of America. Portland, OR USA Aug 2023
4. Rooting depth and productivity responses to SPRUCE treatments. Talk. **S.E. Weber**, J. Childs, J. Latimer, C.M. Iversen. SPRUCE Project Annual All Hands Meeting. Minneapolis, MN USA May 2023
5. How does the plant-AMF mutualism scale from pairwise interactions to complex networks? Talk. **Weber, Sören**, Pascal Niklaus, Jordi Bascompte, Ansgar Kahmen, Marcel van der Heijden. Plant Science Center – Syngenta Symposium. Stein AG, CH. November 2021.
6. Partner choice and biodiversity-ecosystem functioning in the arbuscular mycorrhizal symbiosis. Talk. **Weber, Sören**, Pascal Niklaus, Jordi Bascompte, Ansgar Kahmen, Marcel van der Heijden. Plant Science Center – Syngenta Symposium. Stein AG, CH. November 2020.
7. *Terricolous lichen community structure is driven by plant functional traits. *Canceled due to COVID-19*. Poster. Gates, K., Weber, S., Huxley, J.D., Spasojevic, M.J.
8. Partner diversity & resource trade in arbuscular mycorrhizae. Talk. **Weber, Sören**, Pascal Niklaus, Jordi Bascompte, Ansgar Kahmen, Marcel van der Heijden. Plant Science Center – Syngenta Symposium. Stein AG, CH. March 2019.
9. AMF compositional and functional responses to global change. **Weber, Sören**, Michael Goulden, Jeffrey Diez, Michael Allen. Talk. Ecological Society of America Annual Meeting. Portland OR, USA. August 2017.
10. The influence of warming and biotic interactions on the potential for range expansion of native and nonnative species. Betsy Von Holle, **Soren Weber**, Stephanie Igtiben, Kimberly A. Medley, and Christine V. Hawkes. Talk. Ecological Society of America Annual Meeting. Minneapolis, MN. August, 2013.
11. *The effect of enemy release on Eugenia species range expansion with climate change. Igtiben, Stephanie, **Soren Weber**. Poster. Southeastern Evolution and Ecology Conference. Orlando, FL. March, 2013.

Awards and Honors
1. G. Ledyard Stebbins Award. California Native Plant Society. USD 200. 2015.
2. Graduated from University of Central Florida *Summa Cum Laude*. 2014.

Research Mentorship
2021-2022 Lea Sophie Buol, Masters' Student (co-supervised with Pascal Niklaus), University of Zürich
Thesis: "Partner choice and influence of defoliation on the arbuscular mycorrhizal symbiosis"

2018 Kenya Gates, Niwot Ridge LTER REU, University of California, Riverside
Project: "Investigating mycorrhizal associations across a moisture gradient in the alpine tundra"

Professional Service
Reviewer for: New Phytologist, Journal of Ecology, Plant and Soil, Mycorrhiza, Soil Biology and Biochemistry, Biogeochemistry, The Plant Journal, Scientific Reports, "Plant, Cell, & Environment", Journal of Vegetation Science, Tree Physiology, Microbial Ecology, Agriculture, Ecosystems and Environment, EGUSphere, Journal of Environmental Management.

Campus Service
Co-drafted Code of Conduct for Terrestrial Ecosystem Science – Science Focus Area FY24-FY28. Oak Ridge National Laboratory.

Outreach
1. "Plant Soil Interactions". Talk and Q&A. Shannon Jones, Matthew Berens, **Sören Eliot Weber**. North Middle School Lenoir City, TN USA. April 2024
2. "Mycorrhizal Mutualisms". Talk and Q&A. **S.E. Weber**. South Carolina Governors School for Science & Math, Hartsville SC USA. March 2023

Society Membership

Ecological Society of America	since 2012
International Mycorrhiza Society	since 2022
National Postdoctoral Association	since 2022
American Geophysical Union	since 2024

Languages
English (first language, general US dialect)
German (c.a. B1, high German with limited Swiss dialect)