

Curriculum Vitae of Bettina Weber

Basic Information

Address Department of Biology
 University of Graz
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 8010 Graz, Austria

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Website <https://biologie.uni-graz.at/en/functional-diversity-ecology/>

Education

2013 (re-)Habilitation, University of Mainz, Germany

2011 Habilitation in Plant Ecology, University of Kaiserslautern, Germany

2004 MAS (Master of Advanced Studies) Geographical Information Science & Systems, University of Salzburg, Austria

2000 PhD in Biology, University of Kaiserslautern, Germany

1994 Diploma (equivalent to MSc) in Biology, University of Würzburg, Germany, and University of Albany, NY, USA

Academic Positions

Since 2019 Full professor for Botany, University of Graz, Austria

2015-2019 Research Group Leader, Max Planck Institute for Chemistry, Mainz, Germany

2013-2019 Faculty Member, Johannes Gutenberg University, Mainz, Germany

2013-2015 Research Team Leader, Max Planck Institute for Chemistry, Mainz, Germany

2012-2013 Staff Scientist, University of Kaiserslautern, Germany

2008-2012 Research Group Leader, University of Kaiserslautern, Germany

2000-2008 Postdoc Researcher (part-time due to childcare responsibilities), University of Kaiserslautern, Germany

Most Important Publications

Weber, B., Belnap, J., Büdel, B., Antoninka, A.J., Barger, N.N., Chaudhary, V.B., Darrouzet-Nardi, A., Eldridge, D.J., Faist, A.M., Ferrenberg, S., Havrilla, C.A., Huber-Sannwald, E., Malam Issa, O., Maestre, F.T., Reed, S.C., Rodriguez-Caballero, E., Tucker, C., Young, K.E., Zhang, Y., Zhao, Y., Zhou, X., Bowker, M.A. (2022) What is a biocrust? A refined, contemporary definition for a broadening research community. *Biological Reviews*. doi: 10.1111/brv.12862

Rodriguez-Caballero, E., Stanelle, T., Egerer, S., Cheng, Y., Su, H., Canton, Y., Belnap, J., Andreae, M.O., Tegen, I., Reick, C., Pöschl, U., **Weber, B.** (2022) Global cycling and climate effects of aeolian dust controlled by biological soil crusts. *Nature Geoscience*. doi.org/10.1038/s41561-022-00942-1

Edtbauer, A., Pfannerstill, E.Y., Pires Florentino, A.P., Barbosa, C.G.G., Rodriguez-Caballero, E., Zannoni, N., Alves, R.P., Wolff, S., Tsokankunku, A., Aptroot, A., Sá, M.O., Araújo, A.C., Sörgel, M., Oliveira, S.M., **Weber, B.**, Williams, J. (2021) Cryptogamic organisms are a substantial source and sink for volatile organic compounds in the Amazon region. *Commun Earth Environ* 2, 258. <https://doi.org/10.1038/s43247-021-00328-y>

Maier, S., Kratz, A. M., Weber, J., Prass, M., Liu, F., Clark, A. T., Abed, R. M. M., Su, H., Cheng, Y., Eickhorst, T., Fiedler, S., Pöschl, U., **Weber, B.** (2021) Water-driven microbial nitrogen transformations in biological soil crusts causing atmospheric nitrous acid and nitric oxide emissions. *ISME*. <https://doi.org/10.1038/s41396-021-01127-1>

Löbs, N., Barbosa, C.G.C., Brill, S., Walter, D., Ditas, F., de Oliveira Sá, M., de Araújo, A.C., de Oliveira, L.R., Godoi, R.H.M., Wolff, S., Piepenbring, M., Kesselmeier, J., Artaxo, P., Andreae, M.O., Pöschl, U., Pöhlker, C., **Weber, B.** (2020) Aerosol measurement methods to quantify spore emissions from fungi and cryptogamic covers in the Amazon. *Atmospheric Measurement Techniques* 13: 153-164. <https://doi.org/10.5194/amt-13-153-2020>

Rodriguez-Caballero, E., Belnap, J., Büdel, B., Crutzen, P. J., Andreae, M. O., Pöschl, U., & **Weber, B.** (2018). Dryland photoautotrophic soil surface communities endangered by global change. *Nature Geoscience*, 11(3), 185-189. <https://doi.org/10.1038/s41561-018-0072-1>

Maier, S., Tamm, A., Wu, D., Caesar, J., Grube, M., & **Weber, B.** (2018). Photoautotrophic organisms control microbial abundance, diversity, and physiology in different types of

biological soil crusts. *The ISME journal*, 12(4), 1032-1046. <https://doi.org/10.1038/s41396-018-0062-8>

Weber, B., Belnap, J., & Büdel, B. (2016). Biological soil crusts: an organizing principle in drylands (pp. 3-13). Springer, Cham. <https://doi.org/10.1007/978-3-319-30214-0>

Fröhlich, J., Kampf, C.J., **Weber, B.**, Huffman, A., Pöhlker, C., Andreae, M.O., Lang-Yona, N., Gunthe, S.S., Elbert, W., Su, H., Hoor, P., Thines, E., Hoffmann, T., Despres, V.R., Pöschl, U. (2016) Bioaerosols in the Earth System: Climate, Health, and Ecosystem Interactions. *Atmospheric Research* 182: 346-376. doi: 10.1016/j.atmosres.2016.07.018.

Weber, B., Berkemeier, T., Ruckteschler, N., Caesar, J., Heintz, H., Ritter, H., & Braß, H. (2016). Development and calibration of a novel sensor to quantify the water content of surface soils and biological soil crusts. *Methods in Ecology and Evolution*, 7(1), 14-22. <https://doi.org/10.1111/2041-210X.12459>

Andreae, M.O., Acevedo, O.C., Araùjo, A., Artaxo, P., Barbosa, C.G.G., Brito, J., Carbone, S., Chi, X., Cintra, B.B.L., da Silva, N.F., Dias, N.L., Ditas, F., Ditz, R., Godoi, A.F.L., Godoi, R.H.M., Heimann, M., Hoffmann, T., Dias-Júnior, C.Q., Jürgen Kesselmeier, J., Könemann, T., Krüger, M., Lavric, J.V., Manzi, A.O., Moran, D., Nölscher, A.C., Nogueira, D.S., Piedade, M.T.F., Pöhlker, C., Pöschl, U., Ro, C.-U., Ruckteschler, N., Sá, L.D.A., Sá, M. de O., Sales, C.B., dos Santos, R.M.N, Saturno, J., Schöngart, J., Sörgel, M., de Souza, C.M., de Souza, R.A.F., Su, H., Targhetta, N., Tóta, J., Trebs, I., Trumbore, S., van Eijck, A., Walter, D., Wang, Z., **Weber, B.**, Williams, J., Winderlich, J., Wittmann, F., Wolff, S., Yáñez-Serrano, A.M. (2015) The Amazon Tall Tower Observatory (ATTO): measurement site in the remote Amazon Basin: overview of first results of pilot measurements on ecosystem ecology, meteorology, trace gases, and aerosol measurements. *Atmospheric Chemistry and Physics* 15: 10723-10776. <https://doi.org/10.5194/acp-15-10723-2015>

Elbert, W., **Weber, B.**, Burrows, S., Steinkamp, J., Büdel, B., Andreae, M. O., & Pöschl, U. (2012). Contribution of cryptogamic covers to the global cycles of carbon and nitrogen. *Nature Geoscience*, 5(7), 459-462. <https://doi.org/10.1038/ngeo1486>

Büdel, B., Darienko, T., Deutschewitz, K., Dojani, S., Friedl, T., Mohr, K. I., Salisch, M., Reisser, W. & **Weber, B.** (2009). Southern African biological soil crusts are ubiquitous and highly diverse in drylands, being restricted by rainfall frequency. *Microbial ecology*, 57(2), 229-247. <https://doi.org/10.1007/s00248-008-9449-9>