

List of publications – Beat Frey

ISI-Papers

- Brunner I, Plötze M, Zumsteg A, Furrer F, Frey B. (2010) Pioneering fungi and their role in initial weathering of Damma glacier forefield granite in the Swiss Alps. *Geobiology* (submitted).
- Frey B., Rieder S.R., Brunner I., Plotze M., Koetzsch S., Lapanje A., Brandl H., Furrer G. (2010) Weathering-associated bacteria from the Damma glacier forefield: Physiological capabilities and impact on granite dissolution. *Applied and Environmental Microbiology* 76:4788-4796.
- Frey B., Rüdts A., Widmer F. (2010). Changes of rhizosphere bacterial populations during phytoextraction of heavy metal polluted soil with poplar. *Plant Biosystems* 144: 392-395.
- Cocozza C., Cherubini P., Regier N., Saurer M., Frey B., Tognetti R. (2010) Early effects of water deficit on two parental clones of *Populus nigra* grown under different environmental conditions. *Functional Plant Biology* 37: 244–254.
- Graf Pannatier, E.; Dobbertin, M.; Heim A.; Schmitt, M.; Thimonier, A.; Waldner, P., Frey B. (2010) Response of carbon fluxes to the 2003 heat wave and drought in three mature forests in Switzerland. *Biogeochemistry* (in press).
- Reboul R., Geserick C., Lütz-Meindl U., Frey B., Wittmann D., Tenhaken R. (2010). A novel *Arabidopsis* cell wall mutant in UDP-glucose dehydrogenase causes cell wall modifications and developmental defects. *Plant Physiology* (submitted)
- Regier N., Frey B. (2010) Experimental comparison of relative RT-qPCR quantification approaches for gene expression studies in poplar. *BMC Molecular Biology* doi:10.1186/1471-2199-11-57
- Regier N., Streb S., Zeeman S.C., Frey B. (2010) Seasonal changes in starch and sugar content of poplar (*Populus deltoides x nigra* cv. Dorskamp) and the impact of stem girdling on carbohydrate allocation to roots. *Tree Physiology* 30: 979-987.
- Thébault A., Frey B., Mitchell E., Buttler A. (2010) Species-specific effects of polyploidisation and plant traits of *Centaurea maculosa* and *Senecio inaequidens* on rhizosphere microorganisms. *Oecologia* 163: 1011-1020.
- Tipping E., Lofts S., Hooper H., Frey B., Bringmark L., Spurgeon D., Svendsen C. (2010) Critical limits for Hg(II) in soils, derived from chronic toxicity data. *Environmental Pollution* 158: 2465-2471.
- Vollenweider P., Bernasconi P., Gautschi HP, Menard T., Frey B., Günthardt Goerg M., (2010) Compartmentation of heavy metals in foliage of *Populus tremula* grown on soils with mixed contamination. II. Zinc binding inside leaf cell organelles. *Environmental Pollution* doi:10.1016/j.envpol.2010.03.016
- Zumsteg A., Luster J., Göransson H., Smittenberg R., Brunner I., Bernasconi S., Zeyer J., Frey B. (2010). Bacterial, archaeal and fungal succession in the forefield of a receding glacier. *FEMS Microbiology Ecology* (in review).
- Brunner, I. Graf Pannatier, E. Frey B., Rigling, A. Landolt, W. Zimmermann, S. Dobbertin, M., (2009) Morphological and physiological responses of Scots pine fine roots to water supply in a dry climatic region in Switzerland. *Tree Physiol.* 29: 541-550.
- Brunner, I., Plötze, M., Zumsteg, A., Furrer, G., Frey, B. (2009) Pioneering fungi and their role in initial weathering of Damma glacier forefield granite in the Swiss Alps. *Geochim. Cosmochim. Acta* 73, 13, Suppl. 1: A167.
- Frey, B. Kremer, J. Rüdts, A. Sciacca, S. Matthies, D. Lüscher, P. (2009) Compaction of forest soil with heavy logging machinery affects soil bacterial community structure. *Eur. J. Soil Biol.* 45: 312-320.
- Regier, N., Streb, S., Cocozza, C., Schaub, M., Cherubini, P., Zeeman, S.C., Frey, B., (2009) Drought tolerance of two black poplar (*Populus nigra* L.) clones: contribution of carbohydrates and oxidative stress defence. *Plant Cell Environ.* 32: 1724-1736.
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- Zumsteg, A.; Brunner, I.; Furrer, G.; Plötze, M.; Frey, B., (2009) Primary microbial succession in a glacier forefield. *Geochim. Cosmochim. Acta* 73, 13, Suppl. 1: A1540.
- Bernasconi, S.M.; Christl, I.; Hajdas, I.; Zimmermann, S.; Hagedorn, F.; Smittenberg, R.H.; Furrer, G.; Zeyer, J.; Brunner, I.; Frey, B.; Plötze, M.; Lapanje, A.; Edwards, P.; Olde Venterink, H.; Göransson, H.; Frossard, E.; Bünemann, E.; Jansa, J.; Tamburini, F.; Welc, M.; Mitchell, E.; Bourdon, B.; Kretzschmar, R.; Reynolds, B.; Lemarchand, E.; Wiederhold, J.; Tipper, E.; Kiczka, M.; Hindshaw, R.; Stähli, M.; Jonas, T.; Magnusson, J.; Bauder, A.; Farinotti, D.; Huss, M.; Wacker, L.; Abbaspour, K.,

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- Ernst G., Zimmermann S., Christie P., Frey B. (2008) Mercury, cadmium and lead concentrations in different ecophysiological groups of earthworms in forest soils. *Environmental Pollution* 156: 1304-1313.
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- Frey B., Stemmer M., Widmer F., Luster J., Sperisen C. (2006) Microbial characterization of a heavy metal-contaminated soil in a model forest ecosystem. *Soil Biology and Biochemistry* 38:1745-1756.
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- Günthardt-Goerg M.S., McQuattie C.J., Maurer S., Frey B. (2000) Visible and microscopical injury in leaves of five deciduous tree species related to current critical ozone levels. *Environmental Pollution* 109: 489-500.
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Book chapters

- Frey B. (2007) Botanical X-ray Microanalysis in Cryo-Scanning Electron Microscopy. In: *Methods in Molecular Biology*, vol 369, *Electron Microscopy: Methods and Protocols*. Ed. J. Kuo. Humana Press Inc. NJ, pp. 529 – 541.
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Non ISI

- Frey B. (2010) Bewertung von Bodenveränderungen durch Befahrung in Waldböden mittels bakteriellen Populationen. *Schweizerische Zeitschrift für Forstwesen* (submitted).
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