

## List of publications

### 1. Peer-reviewed articles in international journals

1. **Rousk, J.**, Bååth, E., Göransson, H., Fransson, A.-M., 2007. Assessing plant-microbial competition for 33-P using uptake into phospholipids. *Applied Soil Ecology* 36, 233-237.
2. **Rousk, J.**, Bååth, E., 2007a. Fungal biomass production and turnover in soil estimated using the acetate-in-ergosterol technique. *Soil Biology & Biochemistry* 39, 2173-2177.
3. **Rousk, J.**, Bååth, E., 2007b. Fungal and bacterial growth in soil with plant materials of different C/N ratios. *FEMS Microbiology Ecology* 62, 350-358.
4. **Rousk, J.**, Aldén-Demoling, L., Bahr, A., Bååth, E., 2008. Examining the fungal and bacterial niche overlap using selective inhibitors in soil. *FEMS Microbiology Ecology* 63, 350-358.
5. **Rousk, J.**, Aldén-Demoling, L., Bååth, E., 2009a. Contrasting short-term antibiotic effects on respiration and bacterial growth compromises the validity of the selective respiratory inhibition technique to distinguish fungi and bacteria. *Microbial Ecology* 58, 75-85.
6. **Rousk, J.**, Brookes, P.C., Bååth, E., 2009b. Contrasting soil pH effects on fungal and bacterial growth suggest functional redundancy in carbon mineralization. *Applied and Environmental Microbiology* 75: 1589-1596.
7. Barcenas Moreno, G., Gomez, M., **Rousk, J.**, Bååth, E., 2009. Adaptation of soil microbial communities to temperature: Comparison of fungi and bacteria in a laboratory experiment. *Global Change Biology* 15, 2950-2957.
8. **Rousk, J.**, Nadkarni, N.M., 2009. Growth measurements of saprotrophic fungi and bacteria reveal differences between canopy and forest floor soils. *Soil Biology & Biochemistry* 41, 862-865.
9. Rinnan, R., **Rousk, J.**, Yergeau, E., Kowalchuk, G.A., Bååth, E., 2009. Temperature adaptation of soil microbial communities along an Antarctic climate gradient: Predicting responses to climate warming. *Global Change Biology* 15, 2615-2625.
10. Van Groenigen, K.J., Bloem, J., Bååth, E., Boeckx, P., **Rousk, J.**, Bodé, S., Forristal, P.D., Jones, M.B. 2010. Abundance, production and stabilization of microbial biomass under conventional and reduced tillage. *Soil Biology & Biochemistry* 42, 48-55.
11. **Rousk, J.**, Brookes, P.C., Bååth, 2010a. The microbial PLFA composition as affected by pH in an arable soil. *Soil Biology & Biochemistry* 42, 516-520.
12. **Rousk, J.**, Brookes, P.C., Bååth, E., 2010b. Investigating the opposing pH relationships of fungal and bacterial growth in soil. *Soil Biology & Biochemistry* 42, 926-934.
13. **Rousk, J.**, Bååth, E., Brookes, P.C., Lauber, C.L., Lozupone, C., Caporaso, J.G., Knight, R., Fierer, N., 2010c. Soil bacterial and fungal communities across a pH gradient in an arable soil. *The ISME Journal* 4, 1340-1351.

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14. Strickland, M.S., **Rousk, J.**, 2010. Considering fungal:bacterial dominance in soils – Methods, controls, and ecosystem implications (A review). *Soil Biology & Biochemistry* 42, 1385-1395.
15. Bapiri, A., Bååth, E., **Rousk, J.** Drying-rewetting cycles affect fungal and bacterial growth differently in an arable soil. *Microbial Ecology* 60, 419-428.
16. **Rousk, J.**, Jones, D.L. Loss of low molecular weight dissolved organic carbon (DOC) and nitrogen (DON) in H<sub>2</sub>O and 0.5 M K<sub>2</sub>SO<sub>4</sub> soil extracts. 2010. *Soil Biology & Biochemistry* 42, 2331-2335.
17. López-Sangil, L., **Rousk, J.**, Wallander, H., Casals, P. 2011. Microbial growth rate measurements reveal that land-use abandonment promotes a fungal dominance of SOM decomposition in grazed Mediterranean ecosystems. *Biology and Fertility of Soils* 47, 129-138.
18. **Rousk, J.**, Brookes, P.C., Bååth, E., 2011. Fungal and bacterial growth responses to N fertilization and pH in the 150-year 'Park Grass' UK grassland experiment. *FEMS Microbiology Ecology in press* DOI:10.1111/j.1574-6941.2010.01032.x.
19. Bárcenas-Moreno, G., **Rousk, J.**, Bååth, E., 2011. Fungal and bacterial recolonisation of acid and alkaline forest soils following artificial heat treatments. *Soil Biology & Biochemistry in press*.

## 2. Presentations at conferences

1. Poster: *Effect of different substrates on bacterial activity in soil*. Focus on soils, SLU, Uppsala, Sweden. \*Best poster award\*, September 2005
2. Poster: *Different response of fungal and bacterial activity after adding alfalfa or barley straw to soil*. International Symposium on Microbial Ecology (ISME), Vienna, Austria, August 2006.
3. Presentation: *Distinguishing between fungal and bacterial growth responses to different natural substrates in soil, and a first attempt to address interaction*. Soil Ecology: Crossing the frontier between below- and above-ground, convention in conjunction with course (below), Wageningen, the Netherlands. February 2007.
4. Presentation: *Bacterial control of fungal growth in soil: Assessing the fungal-bacterial niche overlap using growth measurements in a removal experiment*. Ecology Society of America Conference 93 (ESA-93), August 2008.
5. Presentation: *"Isolating the mechanisms that govern the contrasting relationships of the major decomposer groups in soil, fungi and bacteria, to pH"*. Ecology Society of America Meeting 94 (ESA-94), August 2009.
6. Presentation: *Soil pH effects on the composition and growth of soil fungal and bacterial communities, their interaction, and the consequence for low molecular weight C turnover and respiration*. Ecology of Soil Microorganisms, FEMS, Prague, April 2011. *Accepted*.
7. Invited oral presentation (sections of Microbial Ecology and Biogeochemistry): *Assessing the relative contributions of fungi and bacteria to terrestrial biogeochemical processes: state of the art*. Ecology Society of America Meeting (ESA-96), Austin, August 2011. *Accepted*.

## 3. Monographs

- M.Sc honour's thesis: *Induced plant – microorganism competition for P*. Sections of Plant ecology & systematics and Microbial Ecology, Dept. Ecology, Lund

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Univ. Supervisors: Dr. Ann-Mari Fransson &amp; Prof. Erland Bååth.

Ph.D. Thesis (see above): *On the ecology of saprotrophic fungi and bacteria in soil: Biotic and abiotic control of growth rates*. Supervised by Prof. Erland Bååth. Microbial Ecology, Dept. Ecology, Lund Univ., Sweden.

#### 4. Submitted manuscripts

1. **Rousk, J.**, Brookes, P.C., Glanville H., Jones, D.L. Turnover of low molecular weight dissolved organic carbon does not correlate with shifts in microbial community composition or growth across a soil pH gradient. *In revision* (Applied and Environmental Microbiology).
2. **Rousk, J.**, Bååth, E. Growth of saprotrophic fungi and bacteria in soil – A review. *Submitted* (FEMS Microbiology Ecology)
3. Fernández-Calviño, D., **Rousk, J.**, Brookes, P.C., Bååth, E., Bacterial pH-optima for growth track soil pH, but are higher than expected at low pH. *Submitted* (Soil Biology & Biochemistry).

#### 5. Manuscripts in preparation

1. **Rousk, J.**, Glanville, H., Jones, D.L. Adaptation of a simple and accurate method to measure monosaccharides in soil solutions and extracts. *In prep.*
2. Nilsson L.-O., Gundersen P, Kappel-Schmidt I, Vesterdal L, **Rousk, J.** Tree species effects on the soil microbial biomass, activity and community composition. *Manuscript.*
3. Haei, M., **Rousk, J.**, Bååth, E., Öquist, M., Ilstedt, U, Laudon, H., Freeze thaw cycles regulate the soil microbial decomposer community via release of high quality Dissolved Organic Carbon (DOC). *Manuscript.*
4. **Rousk, J.**, Elyaaagubi, F.K., Jones, D.L., , Godbold, D.L. Salt tolerance of bacterial communities in salt-exposed Libyan agricultural soils. *Manuscript.*
5. **Rousk, J.**, Hill, P.W., Jones, D.L., Estimating microbial uptake, transformation and mineralisation of glucose in a continuous addition flow-through soil system. *In prep.*
6. Walsh, J., **Rousk, J.**, Edwards Jones, G., Jones D.L., Williams A.P., Fungal and bacterial growth following anaerobic digestate and mineral N fertilisers in a pot experiment. *In prep.*
7. Ford, H., **Rousk, J.**, Jones, D.L., Jones, L.L., Garbutt, A.A., Grazing effects on microbial community composition, growth, and nutrient transformation in salt marsh and sand dune grasslands. *In prep.*
8. **Rousk, J.**, Frey S.D., Bååth, E. Fungal and bacterial growth and temperature adaptations following 4-years artificial warming of a forest soil. *In prep*