

Programme

The EcoFINDERS final meeting will take place in Dijon on December 1 and 2

| Tuesday 2 December 2014 | |
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| 12:30-3:00 | Author Workshop: Soil Biology and Biochemistry workshop for early career scientists (only on pre-registration) |
| 1:00-4:00 | Registration |
| 4:15-7:00 | Opening Session |
| 4:15-4:30 | Introduction: Dr. Diana Wall , Chair of GSBI, Dr. Philippe Lemanceau , Chair of EcoFINDERS |
| 4:30-5:30 | Introductory lecture: Dr. Ladislav Miko Title: <i>Ugly and dirty friends for millennia - still little known and unrecognised</i> |
| 5:30-7:00 | Poster session |
| 6:30-7:30 | Editorial Board of <i>Soil Biology and Biogeochemistry</i> |
| 6:30-7:30 | <i>Optional</i> : Guided Tour of Dijon city |
| 7:00-9:00 | <p>Evening Session 1: Soil Ecology Education (10 minutes each) Chair: Dr. Loren Byrne, Roger Williams University, United States.</p> <ol style="list-style-type: none"> 1. A happy families game on soil biodiversity - Chevallier, T. 2. Zizare Earthworm Lab: Soil ecology education at preschool - Albizu, O. 3. A K-12 activity using a homemade centrifuge to explore soil biodiversity - Emery, S. 4. "Don Erasmo's milpa": a short story about the below-ground of indigenous polycultures in Mexico - Negrete-Yankelevich, S. 5. Can soil organisms become our best teachers? Exploring soil biodiversity as an ecosystem service provider of excellent environmental education - Byrne, L. 6. Integrating the complexity of soil with interactive games: The soil web and the black box - Barois, I., Aranda-Delgado, E. <p>Break (10 min)</p> <ol style="list-style-type: none"> 7. Sharing knowledge about worms and aggregates on the transamazonian highway - Lavelle, P. 8. Using soil monoliths to teach soil ecology - Vancampenhout, K. 9. The ECOTROP field-school: integrating DNA barcoding into an education program for the census of soil invertebrate biodiversity in Lopé National Park, Gabon - Decaens, T. & the ECOTROP team 10. Enhancing soil biology education through service-learning and community engagement - Grossman, J. 11. A masterclass to train extension workers on best management practices for soil biodiversity - Hanegraff, M. <p>Evening Session 2: Living apart together - linkages between plants and soil organisms and their impact on ecosystem functioning Chair: Dr. Franciska de Vries, University of Manchester, England.</p> <ol style="list-style-type: none"> 1. Tree species diversity effects on soil microbial biomass, diversity and activity across European forest types - Carnol, M. 2. Hidden effects of large herbivores on plant competition through plant-soil feedbacks - Medina-Roldán, E. 3. Fungal role in carbon flow in the rhizosphere along a chronosequence of abandoned agricultural soils - Hannula, S.E. 4. Ectomycorrhizal symbiosis - cure or cause of forest nitrogen limitation? - |

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| | <p>Franklin, O.</p> <p>5. How a native shrub affect soil nematofauna and microbial communities when growing millet in Senegal - Lardy, L.</p> <p>6. How soil organisms interact with plant hormone signaling pathways – Blouin, M.</p> <p>Discussion</p> |
| Wednesday 3 December 2014 | |
| Session 1: Discovery and observation: Assessing soil biodiversity to determine status and trends Chair: Dr. Paul Eggleton , <i>Natural History Museum, England</i> | |
| 8:30-9:00 | Keynote lecture - Dr. Wim van der Putten Title: <i>Trends in Soil Biodiversity Research and Applications</i> |
| 9:00-10:30 | 4 oral presentations (20 minutes each, including discussions) <ol style="list-style-type: none"> Beta diversity and human impact in soil communities - Caruso, T. Unearthing 'old growth' mycorrhizas in ancient ecosystems - Hart, M.M. Unearthing ancient nematode DNA - possible proxy of past ecosystem features? - Vestergård, M. Ethanol's growing demand and belowground biodiversity: soil macroinvertebrate community responses to sugarcane expansion in Brazil - Franco, A.L.C. |
| 10:30-11:00 | Coffee break/Networking |
| Session 2: Tracking and monitoring: Understanding current, and predicting future distribution patterns of soil organisms Chair: Dr. Nobuhiro Kaneko , <i>Yokohama National University, Japan</i> | |
| 11:00-11:30 | Keynote lecture - Dr. Noah Fierer Title: <i>Predicting soil microbial responses to global change factors</i> |
| 11:30-1:00 | 4 oral presentations (20 minutes each, including discussions) <ol style="list-style-type: none"> A framework to synthesize global soil biodiversity data - Ramirez, K.S. The Microbial Landscape in Soils - Biogeography of Soil Microorganisms in the German Biodiversity Exploratories - Kandeler, E. Predicting and understanding the effects of land use on soil bacterial communities over large scales - Griffiths, R. Evaluating soluble aluminum as a mechanism driving bacterial community structure in terrestrial soils from continental to microcosm scales - Welty-Bernard, A.W. |
| 1:00-2:00 | Lunch |
| Session 3: Untangling the linkages: Elucidating relationships between soil biodiversity and ecosystem functioning and ecosystem services Chair: Dr. Bobbi Helgason , <i>Agriculture and Agri-Food Canada, Canada</i> | |
| 2:00-2:30 | Keynote lecture - Dr. Laurent Philippot Title: <i>Linking soil microbial diversity, nitrogen cycling and greenhouse gas emissions</i> |
| 2:30-4:00 | 4 oral presentations (20 minutes each, including discussions) <ol style="list-style-type: none"> Functional microbial diversity, traits and interactions as modulating factors of methane and nitrogen cycling in soils - Bodelier, P.L.E. Importance of community structure for GHG emissions - Lessons learned from genomes and metagenomes - Hallin, S. Soil biodiversity as a driver of ecosystem sustainability - van der Heijden, M.G.A. Resource pulse can alleviate the biodiversity-invasion relationship in soil microbial communities - Falcao Salles, J. |
| 4:00-4:30 | Coffee break/Networking |
| 4:30-5:30 | 3 oral presentations (20 minutes each, including discussions) |

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| | <ol style="list-style-type: none"> 5. Network architecture of rhizosphere bacterial community and ecological similarity with the pathogen predicts plant protection from an infection - Yang, T.J. 6. Absence of large soil predators lead to a decline of lower trophic levels and slower decomposition in temperate beech forests of northwest Spain - Melguizo-Ruiz, N. 7. The influence of soil macrofauna on soil aggregation in agro-ecosystems of sub-Saharan Africa depends on management intensity - Ayuke, F.O. |
| 5:30-7:00 | Poster session (wine and cheese) |
| 6:30-7:30 | <i>Optional: Guided Tour of Dijon city</i> |
| 7:00-9:00 | <p>Evening Session 3: A New Research and Education Initiative: The Global Soil Ecological Urban Network Chairs: Dr. Rich Pouyat, US Forest Service and Dr. Katalin Szlavecz, Johns Hopkins Univ., United States</p> <ol style="list-style-type: none"> 1. Processes and Patterns of Nematode Biodiversity in Urban Soils - Grewal, P.S. 2. Filling the gap in the knowledge of urban soils organisms: ants and earthworms of urban parks - Vergnes, A. 3. Soil invertebrates as indicators of soil quality in urban vegetable gardens - Joimel, S. 4. A multi-city comparison of urban soil ecosystem function - Szlavecz, K. <p>Discussion</p> <p>Evening Session 4: Global harmonization of methods for structural and functional diversity of soil organisms: A GSBI Initiative. (15 minutes each) Chair: Dr. Jörg Römbke, ECT Oekotoxikologie GmbH, Germany.</p> <ol style="list-style-type: none"> 1. Standard methods for the assessment of structural and functional diversity of soil organisms: a critical overview - Römbke, J. 2. Soil invertebrate functional traits - Hedde, M. 3. Which bioindicators are suitable for soil quality monitoring and risk assessment? From relevance study to transfer tool development - Pérès, G. 4. A tiered approach for high-resolution characterization of the soil faunal community via DNA metabarcoding - de Groot, G.A. 5. Edaphobase - The online soil-zoological data warehouse - Russell, D.J. 6. Biomes of Australian Soil Environments (BASE): a dataBASE of Australian soil microbial diversity - Mele, P.M. <p>Discussion (30 minutes)</p> |
| Thursday 4 December 2014 | |
| <p>Session 4: Assessing the pressures and threats: Impacts of global change on soil communities, ecosystem functioning and ecosystem services Chair: Dr. Maria Iglesias Briones, Universidad de Vigo, Spain</p> | |
| 8:30-9:00 | <p>Keynote lecture - Dr. David Wardle Title: <i>Aboveground-belowground responses to global change drivers: tales of islands, fires and invaders</i></p> |
| 9:00-10:30 | <p>4 oral presentations (20 minutes each, including discussions)</p> <ol style="list-style-type: none"> 1. Predicting soil bacterial responses to multi-factor global change with trait-based modeling - Le Roux, X. 2. Future climate alters soil biodiversity and carbon storage of northern peatlands - Lindo, Z. 3. Impacts of global climate change on the leaf-litter arthropod community: effects of altered detrital input and rainfall extremes in two long-term field experiments in a deciduous forest - Wise, D.H. 4. Are there links between the responses of soil biota and ecosystem functioning |

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| | to elevated CO ₂ , N deposition and warming? A global perspective - García-Palacios, P. | |
| 10:30-11:00 | Coffee break/Networking | |
| Session 5: Strategies for management and conservation: Practices to maintain and enhance ecosystem services provided by soil biodiversity Chair: Dr. Edmundo Barrios , World Agroforestry Centre (ICRAF), Kenya | | |
| 11:00-11:30 | Keynote - Dr. Junling Zhang Title: <i>Can nutrient management strategy improve diversity of arbuscular mycorrhizal fungi in intensive agroecosystems?</i> | |
| 11:30-1:00 | 4 oral presentations (20 minutes each, including discussions) <ol style="list-style-type: none"> 1. Land use legacies and agrobiodiversity from the below-ground perspective: Los Tuxtlas case study - Negrete-Yankelevich, S. 2. Tropical pasture heterogeneity and soil arthropod biodiversity: bad plants also help - Andrés, P. 3. Biodiversity and ecological succession as indicators of compost maturity and quality - Neher, D.A. 4. Are sustainable agricultural practices sustaining larger earthworm populations? A quantitative review using meta-analysis - Schmidt, O. | |
| 1:00-2:00 | Lunch | |
| Session 6: Extending the knowledge base: The social and economic value of soil biodiversity Chair: Dr. Fatima Maria de Souza Moreira , Universidade Federal de Lavras, Brazil | | |
| 2:00-2:30 | Keynote lecture - Dr. Kate Scow Title: <i>Assessing the economic and social values of soil biodiversity</i> | |
| 2:30-4:00 | 4 oral presentation (20 minutes each, including discussions) <ol style="list-style-type: none"> 1. Soil natural capital: Can we use it to close future yield gaps and reduce agricultural risks? - Hedlund, K 2. Farmer knowledge and use of soil biodiversity: a global synthesis illustrated with case studies - Pauli, N. 3. Measuring changes in agricultural land quality: The case of the Italian farms - Zoupanidou, E. 4. Going underground - why soil biodiversity matters to stakeholders - Delbaere, B. | |
| 4:00-4:30 | Distinguished lecture: Dr. Diana Wall Title: <i>Soil Biodiversity: Big impact of small creatures</i> | |
| 4:30-6:30 | Poster Session/Coffee break | |
| 6:30-Finish | Conference dinner | |
| Friday 5 December 2014, World Soil Day | | |
| Session 7: Setting the agenda for the future: Bridging scientific knowledge and applications for soil and land management Chair: Dr. Philippe Lemanceau , INRA, France | | |
| 8:30-8:50 | <i>Summarising what science brings so far in terms of knowledge and what are the future challenges</i> | Keynote lecture - Dr. Richard Bardgett Title: <i>Digging into the future: future challenges for soil biodiversity research</i> |
| 8:50-9:10 | <i>Views and experiences on applications of soil biodiversity knowledge for soil and land</i> | Keynote lecture - Dr. Michael Swift Title: <i>Applying soil biological knowledge to the management of soil fertility and other ecosystem services: the Tropical Soil Biology and Fertility experience</i> |

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| 9:10-9:30 | <i>management</i> | Keynote lecture - Dr. Bram Brouwer Title: <i>Options for commercial exploitation of assessment tools for soil biodiversity and ecosystem services</i> |
| 9:30-9:50 | <i>Further knowledge required to overcome remaining bottle necks</i> | Keynote lecture - Dr. Michael Stocking Title: <i>Mainstreaming Soil Biodiversity to Deliver Both Global Environmental Benefits and Human Development</i> |
| 9:50-10:10 | | Keynote lecture - Dr. Antonio Bispo Title: <i>Soil biodiversity: from science to bioeconomy</i> |
| 10:10-10:45 | Coffee break | |
| 10:45-12:30 | <i>Panel Discussion: How to translate scientific knowledge in soil policies and for soil management? What are the bottlenecks for such translation? Moderator: Kristin Ohlson</i> | |
| 12:30-13:00 | Presentation of crowd sourcing video - Dr. Ciro Gardi Presentation of the Global Soil Biodiversity Atlas - Dr. Alberto Orgiazzi | |