

Cross-Institute Programme for Sustainable Soil Function

SoilCIP

Newsletter for October 2007



New Staff

Catriona (Catrina) Macdonald joined us on 1st October to work with Steve McGrath and Fangjie Zhao on their BBSRC project 'Long-term Impacts of Heavy Metals on Soil Microbial Diversity, Numbers and Function', (grant no. D002990/1) for 3 years. She replaces Lesley Ogilvie (see February 2007 newsletter).

Catriona has her own website, see: <http://www.esr.cri.nz/competencies/populationhealth/CatrionaMacdonald.htm>

New Student

Darren McCabe became our second DTG Quota student when he joined us on 1st October. He will be working with Penny Hirsch, Saran Sohi and Liz Shaw at Reading on a project entitled 'Assessment of the impact of biofuel crops on the physical distribution of soil organic matter and the structure and activity of microbial communities associated with these substrates'.

Visiting Scientists

Two scientists from China joined Phil Brookes' group this month. Yuping Wu from Zhejiang University will be working with Sarah Kemmitt on relationships between microbial community structure and biosynthesis efficiency, using fallow, arable and grassland soils from Highfield. Chunyue Li from Northwest Agriculture and Forest University, Yangling, will be working with Kathy Snars, determining factors that regulate biomass C/P ratios.

Stephan Deike arrived on 30th October from the Institute of Agricultural and Nutritional Sciences, Martin-Luther-University, Halle-Wittenberg, Germany. He will work with Paul Poulton, evaluating data from our long-term experiments with regard to nitrogen, pesticides and energy use efficiency. He will compare the results obtained with those from trials in Dahnsdorf (Brandenburg, Germany) and Slagelse (Denmark) with the aim of deriving a meaningful assessment of different management practices based on energy use efficiency.

Integrating Water and Agricultural Management

Defra's Farming and Food Science team has funded Phil Haygarth and Kit Macleod (IGER) to establish Integrating Water and Agricultural Management (IWAM) - a virtual and physical forum to enable greater integration between scientists that provide the evidence base that support Defra policies and to improve the two way exchange between the research community and Defra science and policy staff.

To achieve these two aims Phil and Kit have set up a **web portal** (www.iger.bbsrc.ac.uk/IWAM) that provides regular updates on activities relevant to researchers involved in improving our understanding of how our management of the rural landscape from the soil aggregate to catchment scale can be integrated with our management of inland water bodies (i.e. rivers and lakes).

As part of the web portal they have a **Land Water Blog** (<http://landwaterblog.blogspot.com>) that contains posts on coming workshops and conferences, reports from such events, including presentations and interviews from the first IWAM workshop that was held on the 19th September in Birmingham.

A key component of their coordination role is to host an **International Workshop on Agriculture, Water Management and Climate Change** on 4-6th March 2008 in Bath, UK. The purpose of this workshop is to examine how climate change will influence our approach to assessing and mitigating agriculture's impact on sustainable water management. They plan to facilitate discussions around the themes of:

- Assessing and mitigating agriculture's impact on sustainable water management,
- Impacts and mitigation of climate change on water resources,
- Impacts and mitigation of climate change on the biogeochemistry and ecology of land and water and,
- Integrated and adaptive management of water and agriculture under climate change.

Confirmed keynote speakers include: N. Arnell (Reading, UK), R. Betts (MetOffice, UK), P. Haygarth (IGER, UK), L. Heathwaite (Lancaster, UK), E. Jeppesen (NERI, Denmark), J. McDonald (Oregon, USA), C. Neal (CEH, UK), C. Pahl-Wostl (Osnabrück, Germany) and A. Sharpley (Arkansas, USA).

They are looking to involve all those scientists that have a role in providing material for evidence base policy and in improving the mechanisms for knowledge exchange and utilisation between researchers and Defra science and policy staff.

Please register your interest in attending and submit your abstracts by 30th November 2007 at the IWAM web portal (www.iger.bbsrc.ac.uk/IWAM). Contact Phil and Kit (water.coordination@bbsrc.ac.uk) if you would like to be added to their mailing list.

IPSS/SCI conference

Phil Haygarth presented a paper on 'Mitigating diffuse water pollution – what is achievable' at this month's joint meeting of the Institute of Professional Soil Scientists and the Society of Chemical Industry Agriculture and Environment Group on 'Soil and Water Protection through Integrated Catchment Management'. The conference also featured the launch of the Environment Agency's Soil Strategy, copies of which are available at:

<http://www.environment-agency.gov.uk/subjects/landquality/1730389/>

Consultation on the proposed EU Soil Framework Directive

A number of you helped me to prepare a response to Defra's Consultation on the proposed EU Soil Framework Directive and initial Regulatory Impact Assessment. Thank you for that. If you would like a copy of the response, please ask. The consultation closed on 19th October but, at the time of writing, the papers were still accessible at:

<http://www.defra.gov.uk/corporate/consult/soil-directive/index.htm>

Joint China-BBSRC Workshop on Soil Quality, Beijing October, 2007



A 'Soil Quality' Workshop was held from 8th to 12th October in Beijing, China. It was organised jointly by Phil Brookes and Prof Qimei Lin, China Agriculture University (CAU), Beijing. It was jointly supported by the BBSRC, the Natural Science Fund of China, the Education Ministry of China, China Agricultural University, the Chinese Academy of Science and the Chinese Academy of Agricultural Science. More than 40 delegates participated, with about 30 from China and 13 sponsored by BBSRC, from Italy, Japan and UK. SoilCIP delegates were Phil, David Powlson, Penny Hirsch, Sarah Kemmitt and Kathy Snars; other UK delegates were Richard Bardgett (Lancaster), Helaina Black (Macaulay), Liz Stockdale (Newcastle) and Richard Evershed (Bristol). Debate focussed on the main workshop theme of Soil Quality. It was lively throughout, both in the more formal lecture sessions and at the workshop Round Table discussions. Despite a genuine belief that the term was not very helpful in a strictly scientific sense, it survived, albeit narrowly, the ordeal of critical, and sometimes sceptical, examination by the delegates. It was considered that 'Soil Quality' is a term that the non-specialist finds easy to relate to. However, the Workshop decided that the term 'Multifunctionality' should be firmly linked to the idea of 'Soil Quality' so that a more specialised audience could live with it!

The Conference Dinner was held at the Herb Research Institute in Beijing, which has an excellent restaurant. We were able to dine outside and enjoyed listening to songs and music from some very talented students from the University. The Restaurant provides the unusual option of 'catch your own' from a large carp pool in the garden. The evening was enjoyed by all. I send a special thank you to the students of the Soil Biology group at CAU, led by Qimei Lin. They gave up a great deal of their free time to make the event run smoothly and successfully.

Chinese honours

David Powlson, Paul Poulton and Chris Watts have all been made visiting professors of the Chinese Academy of Agricultural Sciences, Dezhou Station, following their very successful visit this month. Chris is currently writing a guide to help the Chinese use his aggregate stability test.

Quota DTG PhD studentships

Don't forget the call for the next round of studentship bids, e-mailed on 3rd October. In case you've lost or forgotten them, details are below. I've received just one proposal so far.

Project proposals should initially be submitted to a member of the SoilCIP Management Board (Keith, Steve or Andy at Rothamsted; Phil Haygarth, Phil Murray or Les at North Wyke). We will select the 4 best proposals. I would like to align our process with that of the rest of Rothamsted so that our HR can process SoilCIP candidates along with Rothamsted's. It will save them and us a lot of extra work. We will retain choice of projects and students, but I will pass our selection through the Rothamsted PGEC.

1. All proposals should be on the standard form available on the intra-net to Rothamsted staff or from Keith
2. All supervisors and co-supervisors must have been approved prior to submission. If a new, non-approved member of staff at Rothamsted wants to be involved in supervision then please begin the approval process with the appropriate form. North Wyke SoilCIP staff will still be within IGER's approval system.
3. We are now able to co-fund quota studentships on a 50:50 basis. This can be with another body (e.g. HGCA) or with a DTG held by another Institute or University. BBSRC is eager to see more co-funding so please consider opportunities for this, including with the Rothamsted DTG.
4. BBSRC has identified some key areas for student training: mathematical biology, business experience and public engagement. We should aim to bring these, especially mathematical biology, into the proposals.
5. The **deadline** for proposals to SoilCIP Management Board members is **November 23rd**.

Keith Goulding, 31st October 2007