

## Report on the Spring 2013 meeting of the Scottish Freshwater Group

On the 4<sup>th</sup> April 2013 a rather special occasion took place...the Scottish Freshwater Group gathered at the University of Stirling for the 90<sup>th</sup> time! Intentionally, the theme of the meeting was kept open to celebrate the diversity of freshwater science and to include an array of speakers involving PhD students at various stages in their research to eminent experts in the field.

Laurence Carvalho (CEH) opened proceedings and chaired the day's agenda introducing straight away, PhD student Fiona Thompson (University of Stirling) who propelled the audience into the mysterious world of freshwater pearl mussel manoeuvrings in response to increased flow velocities. Fiona demonstrated through some elegant experiments how her findings could potentially be used to support strategies for conserving this critically endangered species by identifying the sedimentary habitats where populations are most resilient to high flow events. After that, we saw evidence of Emma Goodyer (RBGE) getting up to her knees in Scottish blanket mires whilst sampling for desmid algal communities to determine their usefulness as bioindicators of peatland quality. She is also in the process of producing a key to this exquisitely beautiful group of algae as part of her PhD research which is jointly funded by SNH and SEPA (Figure 1). Then, Will Brownlie (CEH) took us through the rather unpleasant yet intriguing task of his PhD research aimed at deciphering the phosphorus footprint produced by rural septic tanks situated in the Loch Leven catchment, Scotland. Initial results based on a survey of approx 150 households within the study area indicated that owners of private sewerage systems generally need more information to support a shift towards user-friendly behaviour that will ultimately reduce their phosphorus signal. Next on, Tommy McDermott (APEM Ltd) delivered an update on progress with identifying field measurable ecological indicators of severe hydrological pressure attributed to abstraction and flow regulation.

The afternoon session began with Katherine Webster (Trinity College Dublin) who is widely recognised for her contributions to landscape limnology and so, altogether we hopped across the water to find out how sophisticated analysis techniques (<http://www.fw.msu.edu/~llrg/index.php>) were being applied to characterise the hydromorphology of Irish lakes (Figure 2). From his PhD work, John Hume (University of Glasgow) presented a strong case, using morphological and genetic evidence from Scottish and Irish populations, for synonymising the European brook and river lamprey together under a single species, *Lampetra fluviatilis sensu stricto*. Andrew Tyler (University of Stirling) introduced the audience to GLOBOLAKES (<http://www.globolakes.ac.uk/>), a 5 year research project developing remote sensing to improve our understanding of how freshwater lakes respond to environmental change, examining 1000 lakes worldwide which represent two-thirds of the world's surface freshwater (see also FBA News Spring 2013 Issue 59 p 4-5). And last though certainly by no means least, Charles Perfect (University of Stirling) brought our attention to "The Scottish Rivers Handbook", which outlines an introduction to the physical character of Scotland's rivers and is soon to be published, so keep a beady eye on the CRESS website (<http://www.cress.stir.ac.uk/>).

Afterwards, we customarily retired to the local pub to continue discussion and chat further about possible centennial celebrations of the Scottish Freshwater Group in 5 years from now!

The next SFG meeting will be held on Thursday 24<sup>th</sup> October 2013. If you would like to receive further details please email Laurence Carvalho ([laca@ceh.ac.uk](mailto:laca@ceh.ac.uk)) or visit the SFG homepage

[http://www.ceh.ac.uk/sci\\_programmes/water/ScottishFreshwaterGroup.html](http://www.ceh.ac.uk/sci_programmes/water/ScottishFreshwaterGroup.html)). It is now also possible to receive SFG notifications via Facebook (Scottish Freshwater Group) or follow us on Twitter @Scottish\_FwGrp.

Pauline Lang

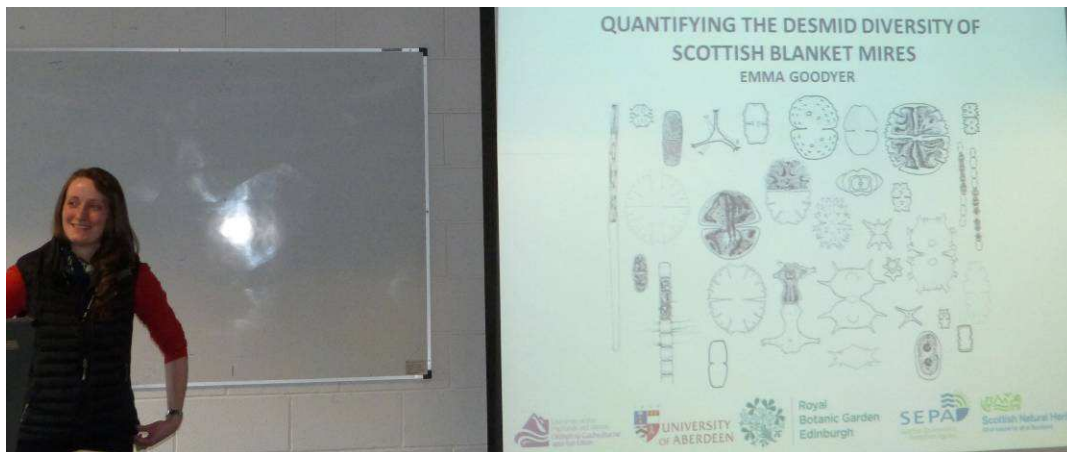


Figure 1. Emma Goodyer with picturesque illustrations of mire desmids. Photo: Pauline Lang.

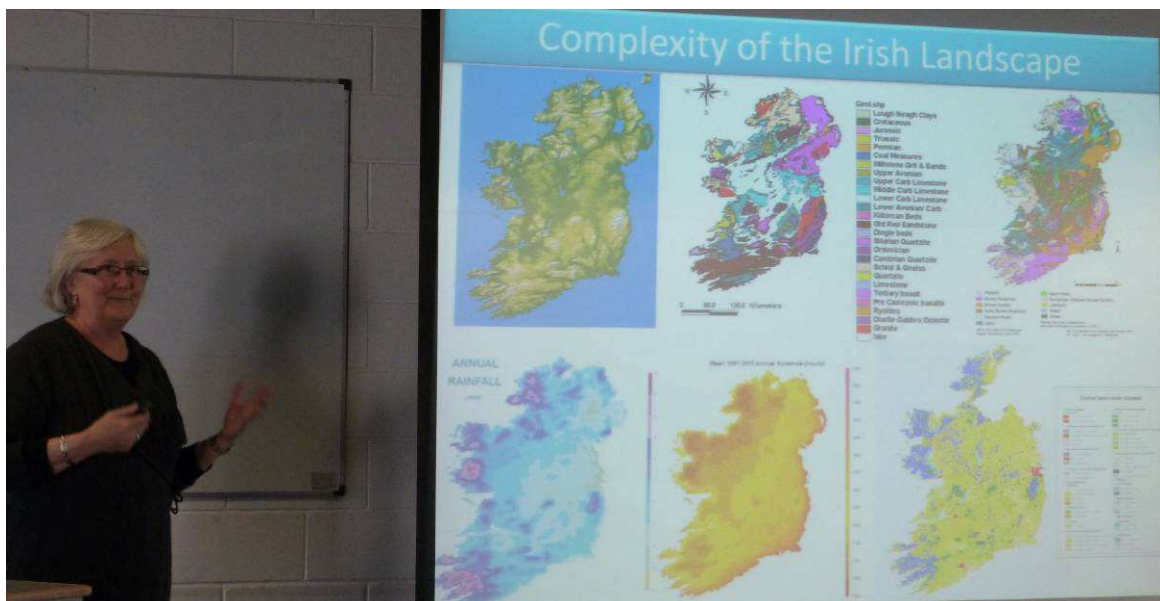


Figure 2. Dr Katherine E. Webster discussing the complexity of the Irish landscape. Photo: Pauline Lang.