

Report on the Autumn 2012 meeting of the Scottish Freshwater Group

Freshwater research in the developing world was the theme of the Autumn 2012 meeting of the Scottish Freshwater Group (SFG), which took place at the University of Stirling on 25th October and showcased a diversity of specialists applying their expertise to help understand and tackle environmental issues relating to freshwater habitats in low income countries. As well as the more typical freshwater scientists, there were a broad range of disciplines represented amongst the speakers with an artist, an economist and possibly our first ever lawyer highlighting a number of projects in Africa, Asia and Latin America.

The chair, John Briggs, the International Dean (Africa) and Vice Principal from the University of Glasgow introduced the first speaker, Holly Keasey, an artist in residence at the Dundee Contemporary Arts. Holly's work develops her concept of "The Water Tourist" in us all. Holly is interested in the politics of global water security and is running a series of performances/events using art to engage different audiences with water security issues in low income countries. This includes giving Victorian water treatment on a couch covered in images of cyanobacteria, whilst engaging, through video, the captive and relaxed participant in water poverty issues (Fig 1). Cyanobacteria were the theme of the second talk, given by Geoff Codd (University of Stirling) and their role in flamingo mass mortalities in Kenya. Despite being a natural component of flamingo diets (and responsible for their pink plumage), cyanotoxins can still accumulate to high levels in flamingos and may interact synergistically with other stressors in the environment to cause mass mortalities. Mike Kennedy (University of Aberdeen) & Pauline Lang (SEPA) were next up and introduced the Southern African River Assessment Scheme (SAFRASS), a project developing a set of ecological tools for monitoring Zambian river quality and biointegrity. Their freshwater research included the great Zambezi River and Victoria Falls, following the footsteps of Scot's born pioneering explorer, Dr David Livingstone (Fig 2). Photos of hippo, crocodile and elephant encounters enticed the audience, broadening the concept of "indicator species". Next up, Alan MacDonald (British Geological Survey) provided a striking image of a young child carrying 25 kg of water on her head as part of her daily routine to collect sufficient water to drink and wash. The talk highlighted the large groundwater reserves in water-scarce regions but also the importance of responsible sustainable use. This stimulated an interesting debate on role and responsibilities of scientists in global water issues.

After lunch and mingling around the posters, Craig Macadam (Buglife) gave a fascinating picture of the richness of Sri Lanka's invertebrates in particular highlighting the 50 species of endemic freshwater crabs, 37 of which are threatened with global extinction. Returning again to Africa, Julissa Tapia Grimaldo, a PhD student at Glasgow University, presented probably one of the most enviable PhD projects, comparing calcareous macrophyte diversity patterns between UK and Zambian rivers. The final two talks then broadened the agenda: Julia Martin Ortega (James Hutton Institute) examined a large number of schemes for payment for services provided by freshwaters in Latin America highlighting a discrepancy between the payments made from people for water services and what the seller actually receives. Finally, Andrew Allan (University of Dundee) introduced a new project investigating ecosystem services in the Bangladesh Delta and the complex conflicts between water use in Bangladesh and upstream plans in China and India. At the end of the meeting it was announced the SFG had entered the world of social media with a new Facebook page and Twitter

account. To celebrate this new virtual social world, a real social gathering took place at the local pub, where earnest discussions carried on between speakers and audience.

The next SFG meeting will be held on Thursday 4th April, 2013. If you would like to receive details of this please email Laurence Carvalho (laca@ceh.ac.uk) or receive notifications via Facebook (Scottish Freshwater Group) or Twitter (SFG@Scottish_FwGrp).

Laurence Carvalho & Pauline Lang



Fig 1. A Water Tourist (photo credit, Holly Keasey)



Fig 2. Memorial statue of Dr David Livingstone overlooking the spectacular Victoria Falls, known locally in Zambia as Mosi-oa-Tunya, meaning “the smoke that thunders” (photo credit, Pauline Lang)



Fig 3. Establishing ecological connections through citizen science (photo credit, Pauline Lang)