

Staff News

Fiona Tweed was an invited expert advisor to a series of workshops on risk communication and risk education for natural hazards. The workshops were part of a European Commission funded 7th Framework project CAPHAZ-NET (Social Capacity Building for Natural Hazards: Towards More Resilient Societies) held on 7th and 8th June 2010 at the Anton Melik Geographical Institute in Ljubljana, Slovenia. CAPHAZ-NET aims to assess existing practices and policies for social capacity building in the field of natural hazards across Europe. The workshop sessions drew on the expertise of experienced academics, stakeholders and policy makers from across Europe. Fiona gave a presentation entitled 'Risk communication and social capacity - Katla evacuation simulation, Iceland'. The relevance of this sort of work became obvious during the summer of 2010 when the eruption of an Icelandic volcano caused disruption to air traffic throughout northern Europe (see below NERC Project).

John Dover was a co-convenor of Butterfly Conservation's annual conference in March 2010 and, together with two colleagues including IESR Hon. Fellow Martin Warren, has now edited a volume of the conference papers. The papers are being produced as a special issue of the *Journal of Insect Conservation* (volume 15) and also as a book.

IESR Website

The Institute website address is at the top of the newsletter. Further details of Institute activities and facilities are available on the website.

Business Support Projects

Renewable Energy Supply Chain Opportunities (RESCO)



The RESCO project is now in its second year. Funding continues, despite the closing of the regional development agency, Advantage West Midlands.

The RESCO website is now up and running at <http://www.resco.org.uk/> and businesses are registering for the database. Individual businesses have been visited by experts to advise them on aspects of the renewable energy supply chain and Special Interest Group meetings have been run to inform clients of opportunities and enable networking.

RESCO is engaging with major companies in renewables, such as Siemens, Alstom Grid and Eon to identify supply chain opportunities for the Midlands. Further funding is being actively sought to continue the project after 2012.

Renewable Energies Transfer System (RETS)



EU Renewable Energy Seminars – 22nd-24th February 2011 at Staffordshire University.

As part of a Europe-wide partnership to tackle the challenges of renewable energies for local and regional authorities, IESR will be running a series of seminars in February 2011 to improve the knowledge and competencies of local and regional policymakers in renewable energies, so as to facilitate the deployment of coherent and value-added strategic renewable energies policies. The programme for the series is available here http://www.rets-project.eu/en/seminar_1/seminar-22nd-24th-february.html

Good Practices in Regional Innovation (GPrix)



As part of the GPrix project Staffordshire University is evaluating the effectiveness of innovation support programmes for small and medium size enterprises (SMEs). SMEs in the West Midlands are invited to complete a survey which collects information on the impact of public innovation support measures during the five-year period 2005 to 2009 inclusive. Input from SMEs is welcomed whether or not a public innovation support measure has been received during this time.

<http://survey.merit.unu.edu/gprix/>

As an incentive to encourage responses a draw will choose five winners who will receive vouchers for £100 to spend at an award-winning Spa or at Marks and Spencer.



Research Student News

IESR is funding a further two research students.

Linda Naughton is studying the theories of Jane Jacobs as a precursor to urban renewal. Linda's supervisors are Professor Steve Williams and Allan Watson.

Malcolm Shead is researching environmental risk in Chennai, India, with Dr. Janet Wright, Derek Pratts and Professor T.V. Kumaran (Madras University, Chennai).

Professor Steve Williams and Dr. Glynn Skerratt are supervising a Ph.D. by papers. William Sheate, Reader in Environmental Assessment at Imperial College London, is working towards a doctorate at Staffordshire University based on his record of publication.

John Dover and his student Caroline Chiquet have been involved in discussions with the university estates department to install green walls around the Stoke campus as part of a bid to improve the appearance of the campus. It is hoped that the walls will be installed early this year and that Caroline will be able to use them for her research into the biodiversity benefits of green walls.



Caroline Chiquet collecting invertebrates from a green wall with a vortis vacuum sampler

Cheshire Active Naturalists

The Cheshire Active Naturalists group is running a 24 hour 'Bioblitz' at Norton Priory Walled Garden, near Runcorn in Cheshire, starting at 6pm on Friday June 3rd 2011. Dave Skingsley is on the organising committee. Recorders, Naturalists and interested members of the public can attend between 10am and 6pm on the Saturday 4th June.

See <http://canbioblitz2011.wordpress.com/> for further details.

IESR Projects

Adobe Revisited – sustainable building materials for the future

A new research project has arisen out of long-standing relationship between Staffordshire University and the University of Sfax in Tunisia. This research focuses on two major problem wastes found within the vicinity of the city of Sfax, both of which are environmentally hazardous to health. The intention is to incorporate quantities of both in an 'adobe' style building block to empirically



demonstrate this as a practical route to commercial manufacture and utilisation. Although the basic ingredient will be local clay, it is intended to blend this with a suitable proportion of olive oil effluent (margine) as a plasticiser and phosphogypsum as a structural component. This targeted fabrication route represents a technical innovation over long-established (traditional) adobe bricks made of 100% clay, as the incorporation of these wastes should also create enhanced product performance in terms of greater strength and improved weathering properties. Apart from the crucial advantage of a major reduction in the energy used carbon footprint when compared with equivalent (fired) clay products, it is also anticipated that the new Tunisian product will possess additional environmental benefits, most notably, a low thermal conductivity (arising from the clay microstructure). This will provide advantageous energy payback when used in the construction of domestic dwellings in hot dry climates i.e. a cool interior during the day and increased warmth at night when the day stored heat is released, thus minimising the need for conventional air-conditioning.

Elements of the experimental work will take place at Staffordshire University under the direction of Prof. Mike Anderson, Dr. Janet Wright and Prof. Fiona Tweed. The École Nationale D'Ingénieurs de Sfax (ENIS) at the University of Sfax will carry out experimental work under the direction of Dr. Emna Ammar and Dr. Houda Mekki.

The photograph shows researchers sampling margine for inclusion in prototype materials for testing.

Public Lectures in Regeneration

Following the success of the series of free public lectures in Regeneration organised by John Dover in 2008, another series was run in 2010. The lectures were as follows:

29th April 2010. Dan Dubowitz: Cultural Masterplanning – the remaking of cities.

27th May 2010. Robert Napier: Regeneration Post-Election – is it sustainable?

24th June 2010. John Dover: Green Infrastructure – a survival tool for business and communities.

Inaugural Lecture

On 21st June 2010 the IESR Director, Steve Williams, gave his inaugural professorial lecture in the Ashley Building at Staffordshire University. Steve's subject was 'Journeys: towards an understanding of the place of tourism in the post-industrial world'.



Steve in tourist mode in New York

Insect Images

Dave Skingsley has had his photographs featured on 5 of the last 6 front covers of the Bulletin of the Amateur Entomologists' Society. Further photographs are featured in the book 'Garden Pest Identification' by Michael Chinnery (A & C Black 2010, ISBN 9781408122839).

For more of Dave's photos, see <http://www.bugbotherer.org.uk>



Photo: D.R.Skingsley

IESR Projects (continued)

My Health Matters

The My Health Matters project has been designed specifically to help build partnership with statutory healthcare providers, the local voluntary and community sector to help meet the challenge of increasing physical activity levels and healthy eating in targeted areas within Stoke-on-Trent.

The project is based on evidence that increasing levels of physical activity and healthy eating will help to raise the low levels of life expectancy experienced by the population of Stoke-on-Trent.

Gemma Hurst from the Faculty of Health has been working on the project and presented some of the project's findings at a conference in Washington D.C. The IESR involvement continues next year with a follow-up study examining the results of the intervention.

For further information see: <http://www.myhealthmatters.org/>

GIS and Clustering Analysis Packages for SMEs

Graham Smith and David Trigg of Staffordshire University's Faculty of Computing, Engineering and Technology are hoping to conduct a small project on the feasibility of offering business analysis, mainly customer or area profiling, to SMEs (small to medium sized firms). The long term goal of this project is to develop cost-effective packages of analysis, so that smaller businesses can get access to the type of analysis that larger firms like Tesco or Marks & Spencers perform in-house.

In order to assess whether the idea is feasible both technically and financially, they are looking for a partner firm with which to perform a package of analysis. The firm would get some 'free' in-depth analysis of their data and IESR would get some feedback on the feasibility of developing the service as a product. The firm would need to invest a few days time to define the type of analysis that would be useful and give feedback on the results of the analysis.

The partner would need two things: 1) data that links customers and their locations to sales information (loyalty cards, online shop, etc) and; 2) the time to spare us a few days time over a period of three or four weeks.

If being a partner in this project sounds interesting, then contact Graham on g.r.smith@staffs.ac.uk

De-glaciation in Glen Etive and Glen Coe

Tim Harris, Graham Smith and Fiona Tweed conducted fieldwork in the Scottish Highlands in June 2010 as part of a new project funded by IESR. The Late Glacial History of the south-west Scottish Highlands is an on-going area of study with debate over the nature of de-glaciation during the Loch Lomond Stadial (10-12,000 years ago). Whilst the general large-scale patterns of de-glaciation have been reported, small-scale studies of landforms associated with de-glaciation, and their relationship to models of de-glaciation is lacking. The dynamic behaviour of the last British Glaciers and their relationships to the climate are an important contributor to our understanding of climate change. Fieldwork in June utilised high-resolution digital terrain modelling (DTM) to verify field observations made during previous field research and to identify new potential landforms in Glen Coe.

NERC project

Fiona Tweed is part of a project team that has been successful in obtaining a £65K research grant from the UK Natural Environment Research Council (NERC) for a project entitled 'Impacts and dynamics of volcanically-generated jökulhlaups, Eyjafjallajökull, Iceland'. This project examines the impacts of large jökulhlaups (glacier outburst floods) on the landscape surrounding the Eyjafjallajökull volcano, eruptions from which caused flights to be suspended over large parts of Europe in April and May last year.

The project capitalises on pre-flood data acquired by members of the project team during fieldwork prior to onset of the Fimmvörðuháls eruption in March and the April eruption in Eyjafjallajökull. The project is being led by Prof. Andrew Russell and other researchers at Newcastle University, with collaborating scientists from Leeds University, Northumbria University, the Icelandic Meteorological Office and the University of Iceland. Dr. Matthew Roberts, Honorary Fellow in IESR, is also a research partner in this venture. The project team members have a highly successful track record of collaboration and publication examining modern and ancient jökulhlaup impacts at the margins of several of Iceland's glaciated volcanoes over the past 15 years.



Floodwater exiting Gigjökull, April 2010.
Image © Matthew Roberts

Geography Staff on BBC Countryfile

Geography staff and students 'star' in BBC Countryfile filming of Geoconservation event in the Peak District.

Patrick Cossey and Geography students from Staffordshire University were recently filmed at an event in the Manifold Valley for the BBC Countryfile programme. The event, organised by Patrick together with Sarah Taylor (Keele University) on behalf of the Staffordshire RIGS Group (a voluntary organisation dedicated to the conservation of geology and landscape features), featured the clearance of vegetation from an important rock exposure at 'Lee Cutting' at Ecton on the Hamps and Manifold Geotrail. On the day (Monday, December 5), joining in on the action were Countryfile presenter Adam Henson (see picture) and a veritable army of willing volunteers. The clearance work revealed some highly fossiliferous (Carboniferous) limestones, a previously unexposed mineral vein and some spectacular folds and fault structures which bear testament to huge forces in the Earth's crust associated with the collision of tectonic plates around 300 millions ago.



In extracts from an original interview Patrick said 'the fact that BBC Countryfile is interested in our work demonstrates the importance of geoconservation from the national perspective there is this growing awareness that geodiversity underpins biodiversity and that rocks and landscape are just as an important part of our planet's natural heritage as the plants and animals that live on it' and that 'if we are to learn anything about the history of our planet and of the events and processes that are shaping it today, it is crucial to ensure that our most important rock exposures are kept free of vegetation and available for study'.

To hear what Pat had to say on camera, tune in to BBC Countryfile on BBC i-player at:

http://www.bbc.co.uk/iplayer/episode/b00wml3t/Countryfile_05_12_2010/
(Countryfile - 05/12/2010 Rural affairs programme. Adam Henson visits Manifold Valley the Peak District where Adam cleans up a cave in the name of conservation),

or visit the Countryfile website at <http://www.bbccountryfilemagazine.com/>

For more information about Staffordshire RIGS please check out <http://www.esci.keele.ac.uk/srigs/>

Presentations

This section briefly reviews presentations made by IESR members at conferences, workshops and other events since May 2010.

At the 3rd International Congress for Physical Activity and Public Health, 5-8 May 2010, Toronto, Canada, Chris Gidlow and Graham Smith presented their work on health and green space with a paper:

Gidlow C., Davey R., Cochrane T. & Smith G. *UK IPEN STUDY: Ecological approach to enhancing physical activity behaviour in deprived urban areas.*

and two posters:

Gidlow C., Ellis N., Davey R., Cochrane T. & Smith G. *Partnership Approach to Promoting Green Space in a Deprived Urban Community in Stoke-on-Trent, UK.*

Gidlow C., Smith G. & Foster C. *Perceived Versus Objective Proximity of Local Destinations and the Relative Importance for Walking.*

Gidlow C. *A partnership approach to promoting green space in deprived urban communities.*

Urban Green Space Colloquium, 2 June 2010, Leeds Metropolitan University.

Gemma Hurst, Rachel Davey, Graham Smith (2010) *My Health Matters – A community-led intervention to reduce health inequalities related to physical activity and healthy eating in Stoke-on-Trent, UK.* Paper presented to the 11th International Congress of Behavioural Medicine, Washington DC, USA, August 2010.

Chris Gidlow presented a paper entitled *Promoting physical activity through neighbourhood green space* at the 6th Conference Movement and Health/2nd Conference of HEPA Europe, Olomouc, Czech Republic, 24-26 November 2010. <http://mandh2010.upol.cz/www/index.php>

Publications

The following publications by IESR members have appeared since May 2010.

Bábek, O., Kalvoda, J., Cossey, P., Devuyst, F-X., Hebig, H-G. and Sevastopulo, G., (2010) Correlation potential of magnetic susceptibility and outcrop gamma-ray logs at Tournaisian-Viséan boundary sections in Western Europe. *Geologica Belgica* 13: 291-308.

Dennis, R.L.H. (2010) *A Resource-Based Habitat View for Conservation. Butterflies in the British Landscape.* Oxford: Wiley-Blackwell. 402 pp.

Dennis, Roger L.H.; Dapporto, Leonardo; Sparks, Tim H.; Williams, Steven R.; Greatorex-Davies, J. Nick; Asher, Jim and Roy, David B. (2010) Turnover and trends in butterfly communities on two British tidal islands: stochastic influences and deterministic factors. *Journal of Biogeography*, 37: 2291-2304.

Dapporto, L and Dennis, R.L.H. (2010) Skipper butterfly impoverishment on large Mediterranean islands (Lepidoptera Hesperidae): deterministic factors and stochastic events. *Biodiversity and Conservation*, 19:2637–2649.

Fox, R. and Dennis, R. L. H. (2010) Winter survival of *Vanessa atalanta* (Linnaeus, 1758) (Lepidoptera: Nymphalidae): A new resident butterfly for Britain and Ireland? *Entomologist's Gazette*, 61:94-103.

Fox, R., Roy, D. B., Dennis, R. L. H. and Asher, J. (2010) A new look at the changing distributions of British butterflies: different analysis, same results. *Entomologist's Gazette*, 61: 225-234.

Hardy, P.B., Kinder, P.M., Sparks, T.H. and Dennis, R.L.H. (2010) Elevation and habitats: the potential of sites at different altitudes to provide refuges for phytophagous insects during climatic fluctuations. *Journal of Insect Conservation* 14: 297-303.

Hardy, P.B. and Dennis, R.L.H. (2010) A butterfly exploiting the matrix: *Pieris napi* (Linnaeus, 1758) (Lepidoptera: Pieridae) ovipositing amongst mown grass in a city park. *Entomologist Gazette*, 61: 155-158.

Tiple, A. D., Padwad, S. V., Dapporto, L., and Dennis, R.L.H. (2010) Male mate location behaviour and encounter sites in a community of tropical butterflies: taxonomic and site associations and distinctions. *Journal of BioSciences*, 35: 629-646, S1-S7.

Dover, J.W.; Rescia, A.; Fungariño, S.; Fairburn, J.; Carey, P.; Lunt, P.; Dennis, R.L.H. & Dover, C.J. (2010) Can hay harvesting detrimentally affect adult butterfly abundance? *Journal of Insect Conservation*, 14: 413-418.

Dover, J.W.; Rescia, A.; Fungariño, S.; Fairburn, J.; Carey, P.; Lunt, P.; Arnot, C.; Dennis, R.L.H. & Dover, C.J. (2011) Land-use, environment, and their impact on butterfly populations in a mountainous pastoral landscape: individual species distribution and abundance. *Journal of Insect Conservation*, 15: 207-220.

Dover, J.W.; Spencer, S.; Collins S.; Hadjigeorgiou I. & Rescia, A. (2011) Grassland butterflies and low intensity farming in Europe. *Journal of Insect Conservation*, 15: 129-137.

Dover, John, Warren, Martin and Shreeve, Tim (2011) 2010 and beyond for Lepidoptera (editorial note). *Journal of Insect Conservation*, 15:1-3.

Rescia, A.J.; Fungariño, S.G. & Dover, J.W. (2010) Reactivación del sistema socioecológico ganadero de Picos de Europa (norte de España)/ Recovery of social-ecological livestock farming system of the Picos de Europa (northern Spain). *Ecosistemas* 19(2): 137-145.

Gidlow, Christopher; Cochrane, Thomas; Davey, Rachel C.; Smith, Graham; Fairburn, Jon (2010) Relative importance of physical and social aspects of perceived neighbourhood environment for self-reported health. *Preventive Medicine*, 51(2): 157-163.

Harris, T.D. and Tweed, F.S. (2010) A research-led, inquiry-based learning experiment: classic landforms of deglaciation, Glen Etive, Scottish Highlands. *Journal of Geography in Higher Education*, vol. 34(4): 511-528.

Hopkins, Ian J. and Callaghan, Arthur A. (2010) Survival of *Conidiobolus* spp. and *Basidiobolus ranarum* in relation to relative humidity and temperature. *Fungal Ecology*, 3: 148-159.

Dave Skingsley contributed four chapters to *The New Prescriber: An integrated approach to medical and non-medical prescribing*. Edited by Fiona Bath-Hextall, Joanne S. Lymn, Roger Knaggs and Dianne Bowskill. Wiley-Blackwell. (2010) ISBN 978-0-470-51987-5

Skingsley, D. Introduction to the central nervous system. Ch29 pp372-382

Skingsley, D. Neurdegenerative disorders. Ch30 pp383-393

Skingsley, D. Depression and Anxiety. Ch31 pp394-405

Skingsley, D. Schizophrenia. Ch32 pp406-415

Skingsley, D.R. (2010) Observations of egg-laying behaviour by the EDB-Nd crane fly *Tanyptera atrata* (Linnaeus 1758). *Bulletin of the Amateur Entomologists' Society* 69(490): 124-125

Smith, Graham; Gidlow, Christopher; Davey, Rachel; and Foster, Charles (2010) What is my walking neighbourhood? A pilot study of English adults' definitions of their local walking neighbourhoods. *International Journal of Behavioral Nutrition and Physical Activity*, 7:34

Russell, Andrew J.; Tweed, Fiona S.; Roberts, Matthew J.; Harris, Tim D.; Gudmundsson, Magnús T.; Knudsen, Óskar and Marren, Philip M. (2010) An unusual jökulhlaup resulting from subglacial volcanism, Sólheimajökull, Iceland. *Quaternary Science Reviews* 29: 1363-1381.

Young, E.M. (2010) Deadly diets: geographical reflections on the global food system. *Geography* 95(2), 60-69.

Rayner, Geof; Gracia, Mabel; Young, Elizabeth; Mauleon, Jose R.; Luque, Emilio and Rivera-Ferre, Marta G. (2010) Why are we fat? Discussions on the socioeconomic dimensions and responses to obesity. *Globalization and Health* (on-line journal) 6(7) doi:10.1186/1744-8603-6-7

IESR Office

The IESR Office is situated in Room S128 of the Mellor Building, College Road, Stoke-on-Trent.
The office is open Monday and Wednesday-Friday (with an hour for lunch about 12.15-1.15).