

Annual Report 2006

Introduction from the Head of Department

2006 has been a year of staffing change for the Department but a year that was overshadowed by the death in February of Robin Donkin, Reader in Historical Geography and Fellow of Jesus College until his retirement in 1996. Robin was a man who brought considerable distinction to the Department – he was elected a Fellow of the British Academy in 1985 and the degree of Doctor of Letters was conferred on him in 1992. The full text of the eulogy spoken at the memorial service at Jesus College can be read [here](#).

Three colleagues left the Department during 2006. In April Dr Mark Billinge, a lecturer in the Department since 1976 took early retirement to take up the post of Development Officer at Magdalene College. Mark during his period of appointment was a historical and cultural geographer who provided outstanding teaching (including many years of taking field classes to Crete), for numerous generations of Cambridge undergraduates. There are few, if any, areas of undergraduate provision within the Department or his College that did not benefit at one time or another from his enthusiasm and dedication. He was for many years Admissions Tutor and then Senior Tutor at Magdalene which brought considerable benefit to both College and University. In research he was interested in cultural geography and cultural theory in Europe. Arising from earlier research on the impact of science on social thought, especially in England, he developed broader interests in modern and post-modern cultural theory and its implications for the historical geography of Europe.

This year saw the resignations of Dr Andrew Shepherd, who took up the post of Reader in the School of Geosciences at the University of Edinburgh, and Dr Dan Low-Beer who took up a senior post in the Performance Evaluation and Policy unit of the Global Fund to fight AIDS, Tuberculosis and Malaria at the World Health Organization in Geneva. We wish them all well in their future careers.

The Department welcomed three new lecturers as replacements – Dr Emma Mawdsley and Dr David Nally who took up their appointments in September/October; and Dr Poul Christoffersen who joined the Department at the end of the year. Emma and David are both Human Geographers. Emma who joined the department from Birkbeck College has research and teaching interests in the politics of environment and development with particular research interests in India, including the study of how its growing middle class is experiencing and constructing environmental change. David is straight from his PhD at the University of British Columbia. His research is conducted in the context of colonial Irish society with particular emphasis on the historical geographies of uneven development and the Great Irish Famine. Poul joins us from the University of Wales at Aberystwyth. His research and teaching interests are in researching glacier dynamics, ice-ocean interaction and ice-mass response to climate change using numerical models and data acquired by satellites and geophysical fieldwork. Poul is based in SPRI.

A number of colleagues earned distinctions during the year. Professor Bill Adams became the first Moran Professor of Conservation and Development following a gift to the University by Mr James Wilson for the promotion of research and teaching in this area. Bill's reputation in the international community is for his work on conservation, sustainability and sustainable development and for his work on African development. Dr. Piers Vitebsky was awarded the Kiriya Prize for his book "Reindeer People: living with animals and spirits in Siberia". Congratulations are also due to Dr Janice Stargardt (Fellow of Sidney Sussex) on her appointment by the PACSEA Foundation of Switzerland to a Professorial Fellowship in Asian Historical Archaeology and Geography. Dr. Leigh Shaw Taylor, Senior Research Associate in HPSS, was appointed to a Lectureship in 18th and 19th Century British Economic and Social History in Cambridge's History Faculty. Al James, a joint appointment in economic geography between the Department and Fitzwilliam College, and Simon Reid-Henry, PhD student supervised by Dr. Jim Duncan, both accepted Lectureships at Queen Mary College.

Amongst the support staff during the year, John Clark, Building Services Technician, took early retirement in April. Nadine Keating, General Office Manager, returned from maternity leave in May. The department librarian, Jane Robinsion, left the department in July to relocate and was replaced by Mr. Robert Carter who joins us from the Department of Architecture. In the Accounts office, Purchasing Clerk, Jane Beaumont left the department and was replaced by Elaine Giles. Alison Maguire, Research Administrator went on maternity leave in September and research administration cover was provided by Ravit Capauner, seconded part-time from the Academic Division. At the end of 2006, Mrs. Veronica Forbes, Undergraduate Administrator, retired after 22 years of service in the department and her long-standing contribution was warmly recognized by everyone. The department welcomed Ms. Diane Wanchoo as her replacement.

Bob Haining

Head of Department

Current Staff

Academic Staff

Professors

W M Adams, MA (Cantab), MSc (London), PhD (Cantab), Professor of Conservation and Development

R J Bennett, MA, PhD (Cantab), FBA, Professor of Geography (1931)

A D Cliff, BA (London), MA (Northwestern), MA (Cantab), PhD, DSc (Bristol), FBA, Professor of Theoretical Geography

J A Dowdeswell, BA (Cantab), MS (Colorado), PhD (Cantab) Professor of Physical Geography, Director of the Scott Polar Research Institute

P L Gibbard, BSc (Sheffield), PhD (Cantab), DOS (Helsinki), Professor of Quaternary Palaeoenvironments

H Graf, MSc, PhD (Humboldt)

R P Haining, MA (Cantab), MSc (Northwestern), PhD (Northwestern), Professor of Human Geography, Head of Department

R L Martin, MA, PhD (Cantab), Professor of Economic Geography

S E Owens, OBE, BSc (UEA), MA (Cantab), PhD (UEA), Professor of Environment and Policy

K S Richards, MA, PhD (Cantab), Professor of Geography (1993)

R M Smith, BA (London), MA (Oxon), PhD (Cantab), FBA, Professor of Historical Geography and Demography

Readers

T P Bayliss-Smith, MA, PhD (Cantab), Reader in Pacific Geography

J S Duncan, BA (Dartmouth College, NH), MA, PhD (Syracuse, NY), Reader in Cultural Geography

C M Oppenheimer, BA (Cantab), PhD (Open), Reader in Volcanology and Remote Sensing

University Senior Lecturers

G Kearns, BA, PhD (Cantab)

S A Radcliffe, BSc London, PhD (Liverpool)

W G Rees, MA, PhD (Cantab)

T Spencer, MA, PhD (Cantab)

S T Trudgill, BSc, PhD (Bristol)

B Vira, BA (Delhi), MA, MPhil, PhD (Cantab)

M J Warrington, BA, PhD (Cantab)

I C Willis, BSc (North London), PhD (Cantab)

University Lecturers

H Allen, MA (Cantab), MSc (Calgary), PhD (Cantab)

N S Arnold, BA, PhD (Cantab)

M D Billinge, MA, PhD (Cantab)

J Brasington, BSc (Bristol), PhD (Cantab)

M Bravo, BEng (Carleton), MPhil, PhD (Cantab)

B J Devereux, BA, PhD (Nottingham), MA (Cantab), Director of the Unit for Landscape Modelling

P M Gray, BA (California, San Diego), MA (California, Berkeley), PhD (Rutgers)

P M R Howell, BA, PhD (Cantab)

A James, MA, PhD (Cantab) (Joint appointment with Fitzwilliam College)

D Low-Beer, BA (Oxon), MPhil (Bristol), PhD (Cantab)

E Mawdsley, BA, PhD (Cantab)

D Nally, BA (University College Cork), PhD (British Columbia)

A Shepherd, BSc, PhD (Leicester)

E E Watson, BSc (UCL), PhD (Cantab)

Assistant Directors of Research

M Bithell, MA, PhD (Cantab) (also Computer Manager)

P Vitebsky, MA (Cantab), PhD (London)

Teaching & Research Associate

C Upton, BSc (London), MSc (Aberdeen), MPhil, PhD (Cantab)

College Teaching Officer

I Moeller BA (Oxon), Mphil (Wales), PhD (Cantab)

Research Staff

Leverhulme Visiting Professor

Professor S Jasanoff

Research Fellows

C D Briggs, MA (Oxon), MPhil, PhD (Cantab)	British Academy Fellow	English Peasants and the provision of civil justice, c1270-1400
N Higgins, BA, MSc (London), PhD (Cambridge)	ESRC Postdoctoral Fellow	Landscapes and Legends: Constructions of Race and Place in a Contemporary London Suburb
A J S McGonigle, MSci (St Andrews), DPhil (Oxon)	NERC Postdoctoral Fellow	Novel Optical remote sensing techniques for long term, high temporal resolution volcanic gas surveillance
P Kitson	British Academy Fellow	The economic context of family formation in England, c. 1550-1851
R C Powell, BA (Oxon), MA (British Columbia),	ESRC Postdoctoral Fellow	Canadian Arctic Research

PhD (Cantab)

Other Research Staff

G Amable, BA (Ghana), MSc (Aberdeen), PhD (Cantab)	Research Associate	with B J Devereux
O Bina	Research Associate	with S E Owens
R S Davies	Senior Research Associate	HPSS
R M Fuller	Senior Research Associate	ULM
E M Garrett, BSc (St Andrews), PhD (Sheffield)	Senior Research Associate	HPSS
A C Jones, BA, MA, PhD (Warwick), MA London	Research Associate	with L M W Shaw-Taylor
J Law, BSc (North East London Polytechnic), MSc (Hong Kong Polytechnic University), PhD (New Brunswick)	Research Associate	with R P Haining
F Mager, PhD	Research Associate	with H Graf
V L Masten, BA (California), MA (California State), PhD (Cantab)	Research Associate	with L M W Shaw-Taylor
F J Nober, PhD (Max Planck Institute for Meteorology)	Research Associate	with H Graf
J E Oeppen	Senior Research Associate	HPSS
A M Reid, BA (Oxon), MSc (London), PhD (Cantab)	Senior Research Associate	HPSS
N S Rushton, BA, MA (Southampton), PhD (Cantab)	Research Associate	with R M Smith
L M W Shaw-Taylor, BA	Senior Research Associate	HPSS

(Open), MSc (Oxon), PhD
(Cantab)

V I Tsanev, MSc (St Petersburg), PhD (Bulgarian Academy of Sciences)	Senior Research Associate	with C Oppenheimer
--	---------------------------	--------------------

C Upton, BSc (London), MSc (Aberdeen), MPhil, PhD (Cantab)	Research Assistant	with W M Adams
--	--------------------	----------------

A M Wilson, BSc (Reading), MSc (Oxon), PhD (Cantab)	Research Associate	with L M W Shaw-Taylor
---	--------------------	------------------------

E A Wrigley, MA, PhD (Cantab)	Researcher	with L M W Shaw-Taylor
-------------------------------	------------	------------------------

J Yang, BS (Nanjing Institute of Meteorology), MS (Chinese Academy of Meteorological Sciences), PhD (Chinese Academy of Sciences)	Computer Associate	with H Graf
---	--------------------	-------------

Passed to A. Maguire for details. Waiting reply. 12-04-07

Academic-related and Support Staff

Administration

A J Maguire, BA (Cantab, Msc (London), PhD (Cantab)

J Horsley, BA (Illinois Wesleyan), MA (UEA)

General Office

N D Keating (General Office Manager)

J E Parsons

M Constantinou

Head of Department' Office

A A Clare, BA (Greenwich), MA (Anglia Polytechnic)

Accounts

J Heath, BSc (London), MSc (Saskatchewan), MAAT

C Hollinshead

J Beaumont (until April)

E. Giles (from August)

Library

J E Robinson, LLB (Hull), MA (Loughborough) (Librarian) (until July)

R Carter, BA (Newcastle), Library Management (Liverpool John Moores) (from August)

J Hampshire, BSc (Open)

Undergraduate Office

V R Forbes

D Wanchoo BA (Open), MA (from November)

Graduate Office

G Matthews, BA (Oxford Polytechnic)

Computing

M V Lucas-Smith, BA (Cantab)

S Harvey, BSc (University of Wales, Aberystwyth)

D Scott, BA

Cartography

I H Agnew, BA (Sheffield Polytechnic), PG Dip Cart (Glasgow)

P J Stickler, BA (South Africa), PG Dip (Swansea) (Technical Officer)

O Tucker, HND Land Administration (Geog Techniques) (CNAA)

Laboratory

S Boreham, BSc (Cambridge College of Arts and Tech), PhD (Open)

C J Rolfe, BSc (University of Portsmouth)

Workshop

J Clarke (until April)

A Hayes, FIScT (Senior Technical Officer)

M Theobald

Reprographics

J D Youlden, BTEC Dip Graphic Design

Unit for Landscape Modelling

R Desmond (Picture Librarian)

A Betts (Picture Librarian)

J Lygo (Photographic Technician) (until September)

A Fuller (Photographic Technician) (from September)

D Mackay (Photographic Technician)

P C Wilson-Smith, BA (University of Wales, Aberystwyth) (Assistant to the Director)

Other Staff

G H Newton, BA (Cantab)

R Tyler (Data Editor, HPSS)

Undergraduate Studies 2005 – 2006

Introduction from the Director

Role of the Undergraduate Office

The Undergraduate Office is run by a member of the academic staff serving as Director (Dr B Vira), together with a full-time Assistant to the Director (Mrs V Forbes) who manages the work of the Office on a day-to-day basis. The Office organises the Department's teaching programme for the Geographical Tripos, including the timetabling and location of lectures, submission of coursework, arrangements for visiting lecturers, production of the annual course guide, the running of examination business, assessment of courses and lecturers, and producing the agenda and minutes for a range of committee meetings. The Department gives it thanks to Mrs Forbes for the remarkable job she has performed in ensuring the smooth running of the Undergraduate Office and following her retirement at the end of 2006, wishes her well for the future. The Undergraduate Office looks forward to working with its new administrator, Ms. Diane Wanchoo.

The Geographical Tripos

At Part 1A students continue to take five compulsory papers and are required to submit work based on four practical projects. The Department continues to embed the changes made to the Part 1A paper structure discussed in last year's plan. No changes are envisaged in the broad structure of Part 1B, where students continue to choose four papers, including at least one from among five Human Geography papers and one from among five Physical Geography papers. They continue to submit three projects, including work undertaken as part of the compulsory field class in the Mediterranean, together with an Open Book paper. At Part II students make a free choice of four papers from fifteen offered, in addition to the Dissertation.

The Teaching Policy Committee has overall responsibility for policy matters at postgraduate and undergraduate level, while the Undergraduate Studies Committee is an executive committee, overseeing the design and delivery of courses and the implementation of the undergraduate teaching programme as a whole. This Committee has student representation, and addresses issues raised by the students, as well as responding to pedagogic matters arising from examination reports, planning the introductory learning day for new students, and overseeing the production of the annual course guide

Greater use continues to be made of electronic resources, with the publication of the annual course guide available on the Departmental intranet. The Department is initiating proceedings for placing all reading lists and lecture handouts in the intranet. The Department is trying further this year to encourage electronic student feedback. The

Undergraduate School continues to monitor it, however, since this new method of course assessment has produced a lower return rate to date.

Examination results

Examination statistics reveal that in 2005 just 80% of students at Part 1A (an increase on last year) gained an Upper Second Class result or better. This proportion increased at Part 1B and Part II, with respectively 88% and 84% of students performing at Upper Second Class level or above.

The number of Thirds continues to be very low, with only two students falling into this category across the whole Tripos. However, this is an increase on the previous year. As in the past, we continue to be concerned about the gender gap in the number of Firsts awarded, with men continuing to outperform their female peers. However, the gender gap at Part 1A and 1B has narrowed markedly this year. The Department is actively considering ways in which this gap might be addressed and continues to monitor the situation.

Residential field classes

Changes in funding arrangements currently threaten the Department's fieldwork programme. Nevertheless, the commitment to fieldwork remains strong, with project work carried out on the Part IB field classes firmly established as part of that year's assessment process. Residential field classes have all been run in the Mediterranean at Easter since 1995 (see table below), with participation in one of these classes compulsory for Part IB students. These classes cover a range of topics and techniques in both human and physical geography, and serve a significant purpose in reinforcing research techniques taught through first- and second-year projects, as well as introducing students to new methodologies that will be helpful to them in carrying out their final-year dissertation.

Vacation/Year	1	2	3
Easter vacation 1995	Algarve	Crete	Netherlands
Easter vacation 1996	Algarve	Crete	Mallorca
Easter vacation 1997	Aeolian islands, Italy	Malta	SE Spain
Easter vacation 1998	Algarve	Crete	Mallorca
Easter vacation 1999	Aeolian islands, Italy	Crete	Malta

Easter vacation 2000	Algarve	Mallorca	SE Spain
Easter vacation 2001	Algarve	Crete	SE Spain
Easter vacation 2002	Aeolian islands, Italy	Algarve	Mallorca
Easter vacation 2003	Algarve	Crete	Mallorca
Easter vacation 2004	Algarve	Crete	Mallorca
Easter vacation 2005	Algarve	Puerto Pollensa (Mallorca)	Palma – (Mallorca)
Easter vacation 2006	Algarve	Morroco Dublin	Majorca Crete

The Part II dissertation

The compulsory dissertation is, like residential fieldwork, a very long-established feature of the Tripos. It offers students the opportunity to carry out an independent investigation based on geographical ideas, methods, and technical skills acquired during the course of the Tripos. Apart from some restrictions felt to be necessary on grounds of logistics or safety, the Department imposes very little constraint on either the topic chosen or the location of study. Students prepare their proposal for submission to their Director of Studies and the Head of Department, at the end of the Lent term; they are also required to submit an assessment of the risks involved in carrying out their research. Undergraduates in recent years have chosen a wide variety of topics and locales for their dissertations, though the proportion of overseas locations continues to fall in the light of the increasing costs which students have to bear throughout their course.

Admissions

While admission to the Department is through the Colleges, the Department plays an important role in liaising with Directors of Studies during the admissions season, particularly in ensuring that high quality pool students are placed. The Director of the Undergraduate Office prepares the Departmental entry for the University Admissions Prospectus, as well as keeping the Department's website and brochure up to date and responding to queries from prospective students. For the first time for some years, the Department also opened its doors on one of the General Arts Open Days. This was a very successful event involving talks, tours and advice to individuals; approximately 150 prospective students visited the Department on that occasion.

Dr B Vira

Director of Undergraduate Studies

Statistics

Part	Class	2005-2006	2004-2005	2003-04	2002-03	2001-02	2000-01
IA	1	14	18	11	12	12	6
	2:1	63	65	58	66	54	47
	2:2	24	20	25	25	22	37
	3	0	1	0	0	2	2
	Ordinary	0	0	0	0	0	0
	Total	102	104	94	103	90	91
IB	1	18	11	14	11	10	8
	2:1	67	71	73	59	68	60
	2:2	19	11	17	19	9	20
	3	0	0	0	1	1	0
	Ordinary	0	0	0	0	0	0
	Total	104	93	104	90	88	88
II	1	15	19	14	15	16	16
	2:1	65	68	70	59	66	58
	2:2	10	16	13	17	12	21
	3	0	1	1	0	0	0
	Ordinary	0	0	0	0	0	0
	Total	90	104	98	91	94	95

Graduate Studies 2005 – 2006

Introduction from the Director

The 2005 - 2006 year saw the Graduate School continue its position as one of the largest MPhil/PhD training programmes in Geography in the UK. 15 PhDs were awarded, as well as 31 MPhil degrees across the five programmes of Environment, Society and Development, GIS and Remote Sensing and Quaternary Science, Geographical research, and Polar Studies. Our students continue to achieve excellent job placements across the academic world, industry, research and government agencies. The list of topics testifies to the breadth and depth of the Department's research base.

The process of administering this wide range of activity would be impossible without the help of many people; 175 applications were processed in 2005 - 2006, and 49 students admitted. This burden falls heavily onto the Graduate Office, staffed by Gae Matthews, who continues to give magnificent support to staff and students. The administration process also relies heavily on the directors of each MPhil and on the Degree Committee, to whom the Department owes a great debt.

Professor R J Bennett

Director of Graduate Studies

Statistics

		Applications	Offers	Admissions (1 Oct, following academic year)	Passes	Fails
PhD	2002/2003	60	20	10	*	None
	2003/2004	40	30	14	*	None
	2004/2005	48	28	14	*	None
	2005/2006	50	32	15	*	None
Environment, Society & Development	2002/2003	76	13	8	8	None
	2003/2004	74	12	9	9	None
	2004/2005	66	66	13	8	None
	2005/2006	64	16	11**	10	None

GIS & Remote Sensing	2002/2003	33	24	11	11	None
	2003/2004	39	11	5	5	None
	2004/2005	31	18	9	9	None
	2005/2006	37	21	13	11	2
Quaternary Science	2002/2003	8	7	3	2 †	None
	2003/2004	14	8	6	6	None
	2004/2005	9	4	2	2	None
	2005/2006	7	5	2	2	None
Geographical Research	2002/2003	6	3	3	3	None
	2003/2004	11	7	6	6	None
	2004/2005	15	6	6	6	None
	2005/2006	17	11	8	8	None
Polar Studies	2002/2003	15	6	2	2	None
	2003/2004	7	5	2	2	None
	2004/2005	13	10	5	5	None
	2005/2006	12	8	4	3****	0

* see details below for details of PhDs awarded in 2005/06

** one student transferred

*** one student left halfway through year

Dissertation Titles 2005-2006

MPhil in Environment, Society, and Development

Name	Dissertation Title
Arshiya Urveeja Bose	Green Imperialism: Stories of Power, Politics and Parochialism from East Africa.
Lily Bygraves	Environmental Refugees: The relationship between forced

	migration and environmental degradation, looking outside the box.
Paul Dickson	Elephants, Ivory and Controversy in Africa.
Ruth Fletcher	Multiple Place Identities and the Construction of Meaning in Participatory Ecological Restoration
Ruth Hatfield	Putting the CAP on South Cambridgeshire: how current government policy will affect the use of agricultural land in the area.
Ashshema Hosany	The Land Reform Process in South Africa: The ‘willing-buyer, willing-seller’ neo-liberal approach and the dissent of the Landless People’s Movement.
Padmakshi Rana	Impact of Ecotourism on Nepal.
Shushil Saigal	Forest Certification: Origin, Progress and Impact.

MPhil in Geographical Information Systems and Remote Sensing

Name	Dissertation Title
Thomas Beskeen	Environmental controls on Mediterranean plant communities.
Kishor Boddu	Predicting the end of the SE Asian monsoon from Eurasian snow cover and surface pressure data.
Katarzyna Bojar	Coastal landscape visualization in multimedia cartography and GIS.
Georgia Galidaki	A study of the relationships between the vegetation structure and vegetation productivity using LiDAR and optical image data.
Sarah Hamylton	Modelling marine habitat variability using strips of casi data in the Seychelles.
Matthew Iwajomo	Hymap hyperspectra remote sensing for hydrocarbon detection
Simisola Iyi-ojo	Mapping and analysis of crime hotspots.

Naga Ratu Kotagiri	Understorey modelling in leaf-on/leaf-off LiDAR data of deciduous woodland.
--------------------	---

MPhil in Quaternary Science

Name	Dissertation Title
Roy Marden	A palynological study of the Late Pleistocene Atlantic Ocean Interstadial 9/ Heinrich 4/ Interstadial 8 comparisons from the Blake Outer Ridge western North Atlantic Ocean
Carolyn Snyder	Palaeoclimate perspectives on climate sensitivity to carbon dioxide

MPhil in Geographical Research

Name	Dissertation Title
Kim Beazley	Rights, risks and relocation: evolving impacts and discourses at Kanha National Park, India.
Martina Diep	Cosmopolitan Urbanism, the Creative Class and Exclusion.
Jennifer Gold	In the service of empire: British imperial forestry institutions, colonial networks and the epistemology of geographical knowledge.
Melanie Jones	The urban park movement in the American South.
Jennie Lloyd	Scaling-up Microfinance in India: exploring the financial and social implications.
Meg Matthews	Troubled Waters: Transboundary Water Management in the New River.

MPhil in Polar Studies

Name	Dissertation Title
Jean de Pomereu	Antarctica: A Geography of the Sacred

Eavan O'Dochartaigh Visual Representation of the Arctic and Public Spectacle in Mid-Victorian England: A Study of the Arctic Art of WHJ Browne

PhDs awarded 2005-2006

Arsel, M	Risking development or development risks? Probing the environmental dilemmas of Turkish modernisation
Banati, Perna	Scaling the epidemic: contextualised responses to AIDS in Southern Africa
Damery, Sarah	Knowledge, institutional response and public risk perception: the case of flood hazards
De Schepper, Stijn	Plio-pleistocene dinoflagellate cyst biostatigraphy and palaeoecology of the Eastern North Atlantic and southern North Sea Basin
Dyson, Jane	Faces of the forest: children's work in Uttaranchal, India
Graf von Hardenberg, Wilko	Nature in Fascist Regimes: Concepts and Policies
Hashim, Nor Rasidah	Anthropogenic tropical forests in the 21st century: The creation, characteristics and uses of secondary forests in Negeri Sembilan, peninsular Malaysia
Katz, Itamar	South Africa youth and HIV/AIDS: Evaluating responses
Kumar, Sanjay	Social capital, local politics and sustainable rural livelihoods: a case study of the eastern India rainfed farming project
Lim, Han-she	Rainfall-runoff behaviour of catchments in the seasonally humid tropics: North Thailand
McMillan, Hilary	End-to-End Flood Forecasting in Cambridgeshire

Research

Research Groupings

Spaces of Economy and Society

Over the past few years, there has been considerable interest in the 'resurgence of regions', as the loci of wealth creation, innovation, economic governance, social welfare and policy intervention. In particular, there is increasing focus on regions as the

foundations of the so-called 'new economy' or 'new society'. This research cluster brings together a number of staff whose research address different aspects of three basic questions relating to the regional dimensions of the 'new economy' and its social and policy impacts:

- What are the geographical foundations of the new economy?
- Why and in what ways is the new economy recasting the geographies of public policy?
- How is the new economy reshaping the landscapes of work and welfare?

Cluster members: Dr P M Gray, Prof R Bennett, Professor R Haining, Dr A James, Professor R Martin, Dr M Warrington.

Historical and Cultural Geography

The main interests of this research cluster lie in culture and in demography. Culture is important to geographers because, in studying diversity and connections, issues of meaning, communication and interpretation are paramount. Demography is important to geographers because population is the material substance of society. The cluster's focus is on:

- questions of power, knowledge and identity with an emphasis on diversity and connections in relation to the inequalities and spatial reach of imperialism,
- the power relations involved in networks of knowledge,
- the geographical imaginations at the heart of national identities
- the spatial patterning of sickness and mortality
- the ideological settings of health and population policies
- the social, legal and cultural embeddedness of family systems.

Culture and demography, meaning and materiality, complement each other since imperialism and colonialism are both issues about power and form the drivers behind global migrations of peoples, diseases, family systems and ideologies that have shaped societies across the globe.

Cluster members: Dr Richard Smith, Professor Andrew Cliff, Dr Gerry Kearns, Dr Jim Duncan, Dr Phil Howell, Dr Michael Bravo, Dr Tim Bayliss-Smith, Dr. D Nally

Society, Environment and Development

Members of the Society, Environment and Development cluster are engaged in research on a diverse range of topics in both the developed and developing world, but share major

interests in institutions, governance and sustainability. Within the Cluster there are three broad, interrelated strands of research:

The Society & Environment group is primarily concerned with environmental ethics, politics and policies in developed countries and in the international arena

The Political Ecology of Development group has interests in the politics, management and human ecology of natural resources in the developing world, especially forests, wildlife, grazing land and water.

The Society & Development group is concerned with social contexts for human development and state-society relations, with research in Africa, South Asia and Latin America.

Cluster members: Dr W Adams, Dr S Owens, Dr S Trudgill, Dr T Bayliss-Smith, Dr B Vira, Dr P Vitebsky, Dr E Watson, Dr D Low-Beer, Dr S Radcliffe, Dr. E Mawdsley

Environmental Processes

The Environmental Processes research cluster focuses on understanding Earth surface or near-surface processes in a diverse range of environmental systems - coastal, ecological, fluvial, volcanic and atmospheric. Common ground is found in crosscutting research projects and in the scientific approaches employed.

Cluster members undertake innovative research, integrating field investigation (often using novel instruments), theoretical modelling, and controlled experiment. Numerical models are tested in experimental circumstances, then applied to field environments. These environments have complex boundary conditions and multiple processes, and considerable experience of research at a field site is needed to gain an understanding of processes and their boundary conditions; such long-term commitment to field sites is a characteristic of the research.

These methods are supported by Earth Observation, using various space-borne, airborne and ground-based sensors (for example, lidar for coastal topography, and UV, visible and infrared spectrometers in measurements of fluxes of volcanic gases and particles in the atmosphere). The cluster is unique in having direct access to the airborne remote sensing capability of the Unit for Landscape Modelling.

The cluster is committed to inter-disciplinary research, amongst its sub-groups, with the Society, Environment and Development cluster, and with groups in other Departments. There are significant contributions to policy and practical application of research in environmental management, with particular emphasis on environmental hazards and risk management (floods, volcanic eruption), and environmental management, conservation and restoration (floodplain woodland, coastal salt marshes).

Cluster members: Professor K Richards, Dr J Brasington, Dr S Trudgill, Dr B Devereux, Dr H Allen, Dr T Spencer, Dr I Möller, Professor H Graf, Dr M Bithell, Dr C Oppenheimer

Glaciology and Quaternary Change

Geological evidence in many forms provides clear records of fluctuations in the earth's climate, and our research seeks to resolve issues that are central to a wider understanding of a range of past, present and predicted future environments and climate change. Within the cluster, several themes of research reflect our interdisciplinary approach towards key scientific problems, including:

- What are the links between ice-sheet flow and sediment delivery to the marine environment?
- What does the stratigraphic record tell us about the nature and rate of Quaternary climate change?
- How will polar ice-sheets respond to changes in climate and what is their contribution to sea level?
- How will the vegetation of polar environments respond to changes in global climate?

Cluster members: Professor J Dowdeswell, Dr N Arnold, Dr Phil Gibbard, Dr Gareth Rees, Dr Andrew Shepherd, Dr Ian Willis, Dr. P Christoffersen

Grants Awarded

Principal Investigator	Total / £	Sponsor	Grant Title
Prof. R.M. Smith	£5,064	Nuffield	Historical demography in sub-Saharan Africa: computer inputting of parochial micro-dataset for Mwanza, 1907-1988
Dr. M. Bravo	£14,172	Bank of Sweden Tercentenary Foundation	Polar Field Stations and IPY history: culture, heritage, present, governance, 1882-present
Prof. R.M. Smith	£12,572	University of Essex	The Sociological study of fertility and morality in Ipswich
Dr. T. Spencer	£4,952	CEH	Washbanks flood defence scheme
Dr L.M.W. Shaw-Taylor	£766,385	ESRC	The occupational structure of Nineteenth Century Britain
Dr A. James	£13,314	ESRC	The Impacts of work-life balance on learning and innovation in regional economies
Prof. E.A. Wrigley	£4,202	British Academy	Mapping the hundreds and mid-nineteenth-century registration districts of England and Wales
Dr M. Bravo	£10,000	Canadian Studies Foundation	Canadian Studies interdisciplinary research project
Dr T. Spencer/Dr B. Devereux	£43,241	Khaled bin Sultan Living Oceans Foundation	CASI land cover mapping (Shallow Marine Environments, Southern Seychelles, Western Indian Ocean)

Graf, Prof H	£30,000	Isaac Newton Trust	Treatment of (mainly) convective clouds in large scale circulation climate models
Wrigley, Prof EA	£6,012	British Academy	Mapping the Hundreds in England and Wales
Lane, Mrs H.	£30,000	AHRC	The First Nations, Inuit, Inupiat and Kalaallit artefact collection from Canada, Alaska, and Greenland: enhancing documentation and access
Owens, Prof. SE (jointly with Prof. Forrester from HPS)	£31,489 to each department	Leverhulme Trust	Visiting Professorship for Prof. S. Jasanoff

Departmental Seminar Programme

- 19 January PROFESSOR SHEILA JASANOFF
(Harvard University)
Harvard University and Leverhulme Visiting Professor
'Biotechnology, biopower, and the comparative politics of knowledge'
- 26 January DR NICK MEGORAN
(University OF Newcastle-upon-Tyne)
'God on our side? The church and the critical geopolitics of mourning 9/11'
- 2 February PROFESSOR KEITH RICHARDS
(University of Cambridge)
'Some thoughts on "geographical" ethics'
- 9 February DR DAVID DEMERITT
(King's College, London)
'Science studies, climate change, and the prospects for constructivist critique'
- 23 February DR BRONWYN PARRY
(Queen Mary, University of London)
'Economy' or 'shadow economy'? Definitional criteria and their implications for the regulation of trade in human tissue samples'
- 2 March PROFESSOR ANDRE ROY
(University of Montreal)
'Turbulence and river morphology: processes, scalings and effects'
- 9 March PROFESSOR NÍELS EINARSSON
(Director, Stefansson Arctic Institute)
'From good to eat to good to watch: Whale watching, adaptation and change in Icelandic fishing communities'
- 25 May PROFESSOR STUART AITKEN
(San Diego State University)
'Young People Crossing Borders'
- 15 June DR KAUZAR SALEH CONTELL
INRA, Bordeaux, France
'Earth's microwave radiation and soil moisture: the SMOS satellite mission and its preparation for launch in 2007'
- 19 October MRS NICKY PADFIELD
(Senior Lecturer, Faculty of Law, University of Cambridge)
Protecting the Environment: Criminal Law and the European Union
- 2 November DR ELANA WILSON
(Norwegian Institute of International Affairs)
Strategies of Similarity and the Movement of Governance Knowledge: Region-Building, Indigenous Identity and International Development in

- 16 November *the Circumpolar North*
DR NICK BARON
(School of History, University of Nottingham)
"'Miracles" on a Geographical Map': Geodetic Utopias and Cartographic
Realism in the Soviet Union, 1920-1938
- 30
November PROFESSOR DAVID NEWMAN
(Dept of Politics and Government, Ben Gurion University, Israel *and*
Visiting Leverhulme Professor, University of Bristol 2006-2007)
Demarcating Boundaries. Geopolitical, Legal and Ethical
Considerations in the Construction of an Israeli-Palestinian Border

Publications 2005

Academic Staff

Regional Economy & Society Research Cluster

Bennett, R. J. Territorial reform of central-regional-local government relations: The implications for Local Economic Development Agencies in England, pp. 21-36, in M. Barlow and D. Wastl-Walter (eds.) *Evolution of Territory and Administration*, Ashgate, Aldershot.

Bennett, R.J. and P.J.A. Robson, The role of trust and contract in the supply of business advice: a comparison of private, public, business association and social network suppliers, *Cambridge Journal of Economics*, 28(4), 471-488

Bennett, R.J. and Robson, P.J.A., The role of boards of directors in small and medium-sized firms, *Journal of Small Business and Enterprise Development*, 11 (1), 95-113.

Bennett, R.J. and C. Smith, The selection and control of management consultants by small business clients, *International Small Business Journal*, 22(5), 435-462.

Fuller, C., **Bennett**, R.J. and Ramsden, M., Local Government and the changing institutional landscape of economic development in England and Wales, *Environment and Planning C: Government and Policy*, 22, 317-347.

Ramsden, M., **Bennett**, R.J. and Fuller C., Short-term policy and the changing institutional landscape of post-16 education and training: the case of learning partnerships in England, Scotland and Wales, *Journal of Education and Work*, 17 (2), 139-165.

Bennett, R. J. and Robson, P. J. A., Support services for SMEs: does the 'franchisee' make a difference to the Business Link offer?, *Environment and Planning C: Government and Policy*, 22, 859-880.

Ramsden, M., **Bennett**, R.J., and Fuller, C., The Learning and Skills Council and the institutional infrastructure for post-16 education and training: An initial assessment, *Journal of Education and Work*, 17 (4), 397-420.

Gray, P.M. "The Social Construction of the Service Sector: Institutional Structures and Labour Market Outcomes" *Geoforum* Vol. 35, No. 1, pp. 23-34.

Gray, P.M "(Expanding) The Role of Geography in Public Policy", James, A., Gray, M., Martin, R., and Plummer, P. *Environment and Planning A*. Vol. 36, No. 11, pp1901-1906.

Goodchild and **Haining**, R.P., "GIS and spatial data analysis: converging perspectives." *Papers in Regional Science*, 83, 363-385.

J.Law and **Haining**, R.P., "A Bayesian approach to modelling binary data: the case of high intensity crime areas". *Geographical Analysis*, 36, 3, 197-216.

V.Ceccato and **Haining**, R.P., "Crime in border regions: the Scandinavian case of Oresund 1998-2001." *Annals, Association of American Geographers*, 94(4), 807-826.

R.Maheswaran and **Haining**, R.P., "Basic issues in geographical analysis." In R.Maheswaran and M.Craglia (eds) *GIS in Public Health Practice*. Taylor and Francis, London, p.13-29.

P.Brindley, R.Maheswaran, T.Pearson, S.Wise and **Haining**, R.P., "Using modelled outdoor air pollution data for health surveillance." In R.Maheswaran and M.Craglia (eds) *GIS in Public Health Practice*. 2004 Taylor and Francis, London, p.125-149.

James, A., Gray, M., Martin, R.L. and Plummer, P., (Expanding) the Role of Geography in Public Policy, *Environment and Planning A* 36 (11): 1901-1905.

Martin, RM, Geography: Making A World of Difference, *Transactions of the Institute of British Geographers*, 29, pp. 146-150.

Martin, RM, Editorial: In Honour of David Keeble: Pioneer in the Study of Regional Enterprise and Entrepreneurship, *Regional Studies*, 38, pp. 867-869.

Martin, RM, The Contemporary Debate over Britain's North-South Divide: Images and Realities of Regional Inequality in late-20th Century Britain, Ch 2. in A.R.H. Baker and M.D. Billinge (Eds) *Geographies of England: The North-South Divide, Imagined and Material*, Cambridge: Cambridge University Press, pp. 15-43.

Martin, RM, *The Economic Potential of Britain's Core Cities*, (with J. Simmie), London: Greater London Authority and Office of the Deputy Prime Minister, 130pp.

Martin, RM, Alfred Marshall and Economic Geography, Ch 10 in *The Economics of Alfred Marshall* (Eds. T. Raffaelli, M. Darco and G. Becattini) Edward Elgar, London, pp. 120-130.

Martin, RM, Competitiveness, Productivity and Economic Growth across the European Regions, *Regional Studies (Special Issue on Regional Competitiveness)*, 38, pp.1045-1067.

Martin, RM, Regional Competitiveness: An Elusive yet Key Concept? (with M. Kitson and P. Tyler), *Regional Studies (Special Issue on Regional Competitiveness)*, 38, pp.991-1000.

Martin, RM, Expanding the Role of Geography in Public Policy (With A. James, M. Gray, and P. Plummer), *Environment and Planning, A*, 36, pp. 1901-1906.

Environmental Processes Cluster

Richards, K., **Bithell**, M., Dove, M. and Hodge, R., "Discrete element modelling: methods and applications in the environmental sciences", *Phil. trans. Roy. Soc. Lond. A*, 362, 1797-1816

Richards, K., **Bithell**, M. and Bravo, M. in "Unifying Geography, common heritage, shared future" pp327-352, Matthews, J.A. and Herbert, D.T. eds., Routledge. On Thu, 2005-01-06 at 10:33, "Space time and Science: Individuals, Emergence and Geographies of Space and Place",

Brasington, J Wheaton, J M and Williams, R D (2004), Modelling Fluvial Sediment Budgets Under Uncertainty, *Eos Transactions AGU*, 85(47), H53C-1264

Bithell, M and **Brasington**, J (2004), Integrating Agent Models of Subsistence Farming With Dynamic Models of Water Distribution, *Eos Transactions AGU*, 85(47), SF33A-0725

Cox, C, **Brasington**, J and Williams, R D (2004), Empirical and Experimental Validation of Channel Dynamics Models, *Eos Transactions AGU*, 85(47), H43A-0358

Hodge, R, **Brasington**, J and Richards, K (2004), Multi-Scale Modelling of Bed Load Transport, *Eos Transactions AGU*, 85(47), H43A-0355

McMillan, H K, **Brasington**, J. and Mihir, M. (2004), Reduced Complexity Modelling of Urban Floodplain Inundation, *Eos Transactions AGU*, 85(47), H11F-0367

Wheaton, J M, **Brasington**, J. and Williams, R (2004), Sub-Reach Scale Morphological Interpretations from DEM Differencing: Accounting for DEM Uncertainty, *Eos Transactions AGU*, 85(47), H43A-0352

Devereux, B.J., Devereux, L.S., and Lindsay, C., Modelling the impact of traffic emissions on the urban environment: A new approach using remotely-sensed data, in Kelly, R., Drake, N., Barr, S., *Spatial Modelling of the Terrestrial Environment*, 227-42, Wiley.

Devereux, B.J., Amable, G., and Costa Posada, C., An efficient image segmentation algorithm for landscape analysis, *International Journal of Applied Earth Observation and Geoprocessing*, 6,1, 47-61.

Amable, G., **Devereux**, B.J., Cockerell, T., Renshaw, G. Analysis of interaction patterns between vegetation canopies and small footprint, high density, airborne LiDAR, *Proceedings of the 20th International Society for Photogrammetry and Remote Sensing Congress*, Istanbul, July, 2004.

Devereux, B.J., Amable, G.S. and Cockerell, T., Modelling The 3d Structure Of Woodland Canopies Using A Small Footprint Airborne Laser Scanner. *Proc. RSPSOC Annual Conference*. Aberdeen 8-11 Sept., 2004.

Fletcher, C.A. and Da Mosto, J with Jensen Smith, D. *The Science of Saving Venice*. Published by Allemandi Press for the Venice in Peril Fund (The British Committee for the Preservation of Venice). ISBN: 8842213101

Graf, H.-F., The complex interaction of aerosols and clouds, *SCIENCE*, Vol.203, 1309-1311.

Nober, F.J., and **Graf**, H.-F., A new convective cloud field model based on principles of self-organisation. *ACP-Discussions*.

Grainger, R. and **Graf**, H.-F., GMES-GATO Strategy Report. G.Braathen, N. Harris, and J. Levine (eds.), *European Commission*, Brussels, Chapter 5: Volcano monitoring and public safety.

Eyring, V. N.R.P. Harris, M. Rex, T.G. Shepherd, D.W. Fahey, J. Austin, M.P. Chipperfield, M. Dameris, P. Forster, A. Gettelmann, **Graf**, H.-F., T. Nagashima, P.A. Newman, M.J. Prather, J.A. Pyle, R.J. Salawitch, B.D. Santer, and D. Waugh, 2004: Comprehensive summary on the workshop on “process-oriented validation of coupled chemistry-climate models”, *SPARC Newsletter*, No 23.

Walter, K. and **Graf**, H.-F., The North Atlantic Variability structure, storm tracks, and precipitation depending on the Polar vortex strength. *ACPD*, September

Graf, H.-F., and K. Walter, 2004: Polar vortex controls coupling of North Atlantic ocean and atmosphere. *Geophys. Res. Lett.* Revised September

S. Wurzler (1,5), M. Simmel, K. Diehl, T. Hennig, H. Herrmann, Y. Iinuma, K. Lehmann, A. Massling, F. Stratmann, A. Wiedensohler, G. Zech, K. Zeromskiene (1), R. Posselt (1,6), K. Hungershofer (2), T. Trautmann (2,7), M. O. Andreae, D. Chand, U. Dusek, G. P. Frank, G. Helas, R. S. Parmar, O. Schmid, T. Winterrath, M. Welling (3), J. Trentmann (3,8), **Graf**, H.-F., (4,9), B. Langmann (4), F. Nober (9), C. Textor (4,10), Impact of vegetation fires on composition and circulation of the atmosphere (EFEU), *The EGGS*. September.

Smith, G.M., Thomson, A.G., **Möller**, I. and Kromkamp, J.C., Using Hyperspectral Imaging for the Assessment of Mudflat Surface Stability. *Journal of Coastal Research*: Vol. 20, No. 4, pp. 1165-1175.

Mason, B.G., Pyle, D.M. and **Oppenheimer**, C., The size and frequency of the largest explosive eruptions on Earth, *Bulletin of Volcanology*, 66, 735-748.

Mather T. A., Tsanev, V. I., Pyle, D. M., McGonigle, A. J. S., **Oppenheimer**, C., Allen, A. G., Characterization and evolution of tropospheric plumes from Lascar and Villarrica volcanoes, Chile, *J. Geophys. Res.*, 109, D21303, doi:10.1029/2004JD004934.

Mather, T.A., **Oppenheimer**, C., Allen, A.G. and McGonigle, A.J.S., Aerosol chemistry of emissions from three contrasting volcanoes in Italy, *Atmospheric Environment*, 38, 5637-5649.

Mather, T.A., Allen, A.G., Pyle, D.M., Davison, B.M., **Oppenheimer**, C. and McGonigle, A.J.S., Nitric acid from volcanoes, *Earth and Planetary Science Letters*, 218, 17-30.

McGonigle, A.J.S., Delmelle, P., **Oppenheimer**, C., Tsanev, V.I., Delfosse, T., Horton, H. and Williams-Jones, G., SO₂ depletion in tropospheric volcanic plumes, *Geophysical Research Letters*, 31, L13201, doi:10.1029/2004GL019990.

McGonigle, A.J.S., **Oppenheimer**, C., Tsanev, V.I., Saunders, S., Mulina, K., Tohui, S., Bosco, J., Nahou, J., Kuduon, J. and Taranu, F., sulphur dioxide fluxes from Papua New Guinea's volcanoes, *Geophysical Research Letters*, 31, L08606, doi:10.1029/2004GL019568.

McGonigle, A.J.S., Thomson, C.L., Tsanev, V.I. and **Oppenheimer**, C., A simple technique for measuring power station SO₂ and NO₂ emissions, *Atmospheric Environment*, doi:10.1016/j.atmosenv.2003.09.048.

Oppenheimer, C. and McGonigle, A.J.S., Exploiting ground-based optical sensing technologies for volcanic gas surveillance, *Annals of Geophysics*, 47(4), 1455-1470.

Oppenheimer, C., Tsanev, V.I., Allen, A.G., McGonigle, A.J.S., Cardoso, A.A., Wiatr, A., Paterlini, W. and de Mello Dias, C., , NO₂ emissions from agricultural burning in São Paulo, Brazil, *Environ. Sci. Technol.*, 38, 4557-4561.

Oppenheimer, C., McGonigle, A.J.S., Allard, P., Wooster, M.J. and Tsanev, V.I., Sulfur, heat and magma budget of Erta 'Ale lava lake, Ethiopia, *Geology*, 32, 509-512.

Richards, K.S., Bithell, M., Dove, M.T. and Hodge, R., Discrete element modelling: methods and applications in the environmental sciences. *Philosophical Transactions of the Royal Society, Series A* **362**, 1-20

Richards, K., Bithell, M and Bravo, M., Space, time and science: individuals, emergence, and geographies of space and place. In *Unifying Geography: Common Heritage, Shared Future*, eds J.A. Matthews and D T Herbert, Routledge, London, 327-352

Harrison, S., Massey, D., **Richards**, K., Magilligan, F.J., Thrift, N. and Bender, B. Thinking across the divide: perspectives on the conversations between physical and human geography. *Area* 36, 435-442

Hughes, F.M.R., **Richards**, K. and others *The Flooded Forest: Guidance for policy makers and river managers in Europe on the restoration of floodplain forests*. European Commission, 90pp

Richards, K. *River: Form and Process in Alluvial Channels*. The Blackburn Press. 360 (facsimile reprint)

Richards, K S and Dove, M T (eds) *Discrete element modelling: methods and applications in the environmental sciences*. Theme Issue, Philosophical Transactions, Royal Society Series A, 362 (1822), 1797-2030

Hagan, A and **Spencer**, T., 'Reef regeneration at Alphonse Atoll, western Indian Ocean, following the 1997-98 ocean warming event.' *Proceedings of the 10th International Coral Reef Symposium*, Okinawa, Japan.

McFadden, L., **Spencer**, T. and Nicholls, R.J. 'Coastal wetland loss and climate change: Towards a global perspective' *UNESCO International Conference Lagoons and Coastal Wetlands in the Global Change Context*. Venice, Italy, Abstracts Volume

Spencer, T., Cahoon, D.R., Day, J.W.Jr. and French, J.R. 'Trends in surface elevation change of European and North American salt marshes' *7th INTECOL International Wetlands Conference*, Utrecht, The Netherlands, Abstracts Volume.

Vafeidis, A.T., Nicholls, R.J., Boot, G., Cox J., Grashoff, P., Hinkel, J., Maatens, R., McFadden, L., **Spencer**, T. and Tol, R.S.J., 'A global database for coastal vulnerability analysis (DINAS COAST)' *LOICZ Newsletter* **33**: 1-4.

Trudgill, S., Goudie, A.S. (Ed.) *Encyclopaedia of Geomorphology*. Blackwells.

Society, Environment & Development research cluster

Adams, W.M. *Against Extinction: the story of conservation*, Earthscan, London (311 pp).

Adams, W.M., Perrow, M.R. and Carpenter, A. 'Conservatives and Champions: River Managers and the River Restoration Discourse in the UK', *Environment and Planning A* 36: 1929-1942.

Adams, W.M. Aveling, R., Brockington, D., Dickson B., Elliott J., Hutton, J., Roe, D., Vira, B., Wolmer, W. 'Biodiversity Conservation and the Eradication of Poverty', *Science* 306: 1146-1149

Adams, W.M. 'When islands expand: intensification and sustainability', pp. 133-153 in Sutton, J. and Widgren, M. *Islands of Intensive Agriculture in the East African Rift and Highlands*, James Currey, Oxford.

Stoddart, D.R., and **Adams**, W.M. 'Fieldwork and unity in Geography', in J.A. Matthews and D.T. Herbert (eds.) *Common Heritage, Shared Future: Perspectives on the Unity of Geography*,

Bayliss-Smith, T. P. 'Hunting and gathering societies, energy flows in'. In C.J. Cleveland (ed.) *The Encyclopaedia of Energy*. Academic Press and Elsevier Science, New York, 183-195.

Low-Beer, D., Cliff, A.D., Smallman-Raynor, M., "Disease and Death in the South African War", *Social History of Medicine*, Vol. 17(2), p. 223-245

Low-Beer, D., Stoneburner, "AIDS communications through social networks: catalyst for behaviour changes, *African Journal of AIDS Research*, Vol. 3(1), p. 1-13.

Low-Beer, D., "The alphabet of AIDS prevention, *Lancet*, Vol 364, p. 19-20

Low-Beer, D., Stoneburner, "Uganda and the Challenge of HIV/AIDS", *Political Economy of AIDS in Africa*, Ed Poku, Whiteside, p. 165-190

Owens, S.E. 'Siting, sustainable development and social priorities', *Journal of Risk Research* 7, 2: 101-114.

Owens, S.E. (with other members of the Royal Commission on Environmental Pollution) *Biomass as a Renewable Energy Source*, Special Report, London: RCEP, 92 pp.

Owens, S.E., (with T. Rayner and O. Bina) 'New agendas for appraisal: reflections on theory, practice and research', *Environment and Planning A* 36, 11, 1943-1959.

Owens, S.E., (with other members of the Royal Commission on Environmental Pollution) *Turning the Tide: Addressing the Impact of Fisheries on the Marine Environment*, Twenty-fifth Report, Cm 6392, London: The Stationery Office, 377 pp.

Trudgill, S., Goudie, A.S. (Ed.) *Encyclopaedia of Geomorphology*. Blackwells.

Adams W.M., Aveling R., Brockington D., Dickson B., Elliott J., Hutton J., Roe D., **Vira**, B., Wolmer, W. "Biodiversity Conservation and the Eradication of Poverty," *Science*, Volume 306, pp. 1146-1149.

Vira, B. "Common Pool Resources: Current Status and Future Prospects," in T. Dyson, R. Cassen and L. Visaria (eds.) *Twenty-first Century India: Population, Environment and Human Development*, Oxford University Press, New Delhi, pp. 328-343.

Vira, B., Iyer, R. and Cassen, R. "Water," in T. Dyson, R. Cassen and L. Visaria (eds.) *Twenty-first Century India: Population, Environment and Human Development*, Oxford University Press, New Delhi, pp. 312-327.

Vira, B. and Vira, S. "India's Urban Environment: Current Knowledge and Future Possibilities", in T. Dyson, R. Cassen and L. Visaria (eds.) *Twenty-first Century India: Population, Environment and Human Development*, Oxford University Press, New Delhi, pp. 292-311.

Watson, E. E., 'What a dolt one is! Language learning and fieldwork in Geography' area, 36 (1): 59-68

Watson, E. E., 'Agricultural Intensification and Social Stratification: Konso contrasted with Marakwet', in Mats Widgren and John Sutton eds. *Islands of Intensive Agriculture*

in Eastern Africa. . Oxford: James Currey; Nairobi: British Institute in East Africa. Pp. 49-67.

Glaciology and Quaternary Science research cluster

Arnold, N.S. and Rees, W.G. 2003. Self-similarity in glacier surface characteristics. *Journal of Glaciology* 49(167), 547-554.

Rippin, D., Willis, I., **Arnold, N.**, Hodson, A., Moore, J. Kohler, J and Bjornsson, H. 2003. Changes in geometry and subglacial drainage midre Lovenbreen, Svalbard, determined from digital elevation models. *Earth Surface Processes and Landforms* 28(3), 273-298.

Dowdeswell, J.A., Floods. In Harrison, S., Pile, S. and Thrift, N.J., (Eds.), *Patterned Ground*, 156-157. Reaktion, London.

Dowdeswell, J.A., Oceans. In Harrison, S., Pile, S. and Thrift, N.J., (Eds.), *Patterned Ground*, 113-115. Reaktion, London.

Dowdeswell, J.A. and Evans, S., Investigations of the form and flow of ice sheets and glaciers using radio-echo sounding. *Reports on Progress in Physics*, v. 67, p. 1821-1861.

Dowdeswell, J.A. and Hagen, J.O., Arctic glaciers and ice caps. In Bamber, J.L. and Payne, A.J., (Eds.), *Mass Balance of the Cryosphere*, p. 527-557, Cambridge University Press.

Dowdeswell, J.A., Benham, T.J., Gorman, M.R., Burgess, D. and Sharp, M.J., Form and flow of the Devon Island Ice Cap, Canadian Arctic. *Journal of Geophysical Research*, v. 109, F02002, doi:10.1029/2003JF000095.

Dowdeswell, J.A., Ó Cofaigh, C. and Pudsey, C.J., Thickness and extent of the subglacial till layer beneath an Antarctic paleo-ice stream. *Geology*, v. 32, p. 13-16.

Dowdeswell, J.A., Ó Cofaigh, C. and Pudsey, C.J., Continental slope morphology and sedimentary processes at the mouth of an Antarctic palaeo-ice stream. *Marine Geology*, v. 204, p. 203-214.

Bamber, J.L., Krabill, W.B., Raper, V. and **Dowdeswell, J.A.**, Anomalous growth of part of a large Arctic ice cap: Austfonna, Svalbard. *Geophysical Research Letters*, v. 31, L12402, doi.10.1029/2004GL019667.

Evans, J., **Dowdeswell, J.A.** and Ó Cofaigh, C., Late Quaternary submarine bedforms and ice-sheet flow in Gerlache Strait and on the adjacent continental shelf, Antarctic Peninsula. *Journal of Quaternary Science*, v. 19, p. 397-407.

Hodgkins, R., Tranter, M. and **Dowdeswell, J.A.**, The characteristics and formation of a high-Arctic proglacial icing. *Geografiska Annaler*, v. 86A, p. 265-275.

Hubberten, H.W., Andreev, A., Astakhov, V.I., Demidov, I., **Dowdeswell, J.A.**, Henriksen, M., Hjort, C., Houmark-Nielsen, M., Jakobsson, M., Larsen, E., Lunkka, J.P., Lyså, A., Mangerud, J., Möller, P., Saarnisto, M., Schirmer, L., Sher, A.V., Siegert, C., Siegert, M.J. and Svendsen, J.I., The periglacial climate and environment in Northern Eurasia during the last glaciation. *Quaternary Science Reviews*, v. 23, p. 1333-1351.

Siegert, M.J. and **Dowdeswell, J.A.**, Numerical reconstructions of the Eurasian ice sheet and climate during the Late Weichselian. *Quaternary Science Reviews*, v. 23, p. 1273-1283.

Svendsen, J.I., Alexanderson, H., Astakhov, V.I., Demidov, I., **Dowdeswell, J.A.**, Funder, S., Gataullin, V., Henriksen, M., Hjort, C., Houmark-Nielsen, M., Hubberten, H.W., Ingólfsson, O., Jakobsson, M., Kjær, K.H., Larsen, E., Lokrantz, H., Lunkka, J.P., Lyså, A., Mangerud, J., Matushkov, A., Murray, A., Möller, P., Niessen, F., Nikolskaya, O., Polyak, L., Saarnisto, M., Siegert, C., Siegert, M.J., Spielhagen, R.F. and Stein, R., Late Quaternary ice-sheet history of Northern Eurasia. *Quaternary Science Reviews*, v. 23, p. 1229-1271.

Zalasiewicz, J., Smith, A., Brenchley, P., Evans, J., Knox, R., Riley, N., Gale, A., Gregory, F.J., Rushton, A., **Gibbard, P.**, Hesselbo, S., Marshall, J., Oates, M., Rawson, P., & Trewhin, N. Simplifying the stratigraphy of time. *Geology* 32, 1-4.

Papanikolaou M., Triantaphyllou M., Broadley, L., **Gibbard, Ph.**, Platzman E. Early-Middle Pleistocene transition in marine sediments on the Gerakas Peninsula, SE Zakynthos Island, Greece. 32nd IGC Florence, *Scientific Sessions: abstracts* (part 1) - 223.

Moscariello, A, Mangili, C, Brauer A, **Gibbard Ph.** Environmental and climate changes recorded by the 16,000-year-long varved lacustrine sequence of the Middle Pleistocene interglacial of Pianico-Sellere (Northern Italy). 32nd IGC Florence - *Scientific Sessions: abstracts* (part 1) - 387.

Hughes, P.D., **Gibbard, P.L.** & Woodward, J.C. Quaternary glaciation in the Atlas Mountains of North Africa. In: Ehlers, J., & Gibbard, P.L. (editors) *Quaternary Glaciations - Extent and Chronology, Part III: South America, Asia, Africa, Australasia, Antarctica*. 255-259. *Developments in Quaternary Science*, Vol. 2c. Amsterdam, Elsevier.

Horton, B. P., **Gibbard, P. L.**, Milne, G. M., Stargardt, J. M., Woodroffe, S.W., Holocene sea levels and palaeoenvironments of the Indo Pacific. *British Sedimentological Research Group Annual Meeting*, Manchester, December 19-21.

Horton, B. P., **Gibbard, P. L.**, Milne, G. M., Stargardt, J. M., Holocene sea levels and palaeoenvironments of the Malay-Thai Peninsula, southeast Asia. *GSA Annual Meeting*, Denver Colorado, November 7-10.

Horton, B. P., **Gibbard, P. L.**, Milne, G. M., Stargardt, J. M., Holocene sea levels and palaeoenvironments of the Malay-Thai Peninsula, southeast Asia: implications for

geophysical modelling. IGCP Project 495, *Quaternary Land-Ocean Interactions: Driving Mechanisms and Coastal Responses*, Bar Harbor, Maine, October 14th - 17th.

Ehlers, J. & **Gibbard**, P.L. (editors) Quaternary Glaciations - Extent and Chronology, Part I: Europe . *Developments in Quaternary Science*, Vol. 2a. Amsterdam, Elsevier.

Ehlers, J. & **Gibbard**, P.L. (editors) Quaternary Glaciations - Extent and Chronology, Part II: North America . *Developments in Quaternary Science*, Vol. 2b. Amsterdam, Elsevier.

Ehlers, J. & **Gibbard**, P.L. (editors) Quaternary Glaciations - Extent and Chronology, Part III: South America, Asia, Africa, Australasia, Antarctica. *Developments in Quaternary Science*, Vol. 2c. Amsterdam, Elsevier.

Head, M. J., **Gibbard** Ph., Early-Middle Pleistocene transitions – a review. 32nd IGC Florence 2004 - *Scientific Sessions: abstracts* (part 1) - 222.

Green, C.P., **Gibbard**, P.L. & Bishop, B., Stoke Newington: geoarchaeology of the Palaeolithic 'floor'. *Proceedings of the Geologists' Association* 115, 193-207.

Gibbard, P.L. Global warming: a perspective from earth history. A position paper of the Stratigraphy Commission of the Geological Society of London (Friday, 26 November, 2004) *EducationGuardian.co.uk*

Gibbard, P.L. Comments on Brad Pillans' proposal for redefining the Quaternary. *Quaternary Perspectives* 14,1, 125-126.

Clark, C.E., **Gibbard**, P.L. & Rose, J. Glacial limits in the British Isles. In: Ehlers, J., & Gibbard, P.L. (editors) Quaternary Glaciations - Extent and Chronology, Part I: Europe . 47-82. *Developments in Quaternary Science*, Vol. 2a. Amsterdam, Elsevier.

Briant, R.M., Coope, G.R., Preece, R.C. Keen, D.H., Boreham, S., Griffiths, H.I., Seddon, M.B. & **Gibbard**, P.L. Fluvial system response to Late Devensian (Weichselian) aridity, Baston, Lincolnshire, England. *Journal of Quaternary Science*, 19, 479-496.

Briant, R.M., Coope, G.R., Preece, R.C. & **Gibbard**, P.L. Evidence for early Devensian (Weichselian) fluvial sedimentation: geochronological and palaeoenvironmental data from Upper Pleistocene deposits at Deeping St.James, Lincolnshire, England. *Quaternaire*, 15, 5-15.

Morris, E.M. Techniques for predicting runoff from glacierized areas. In: Peyto Glacier - One century of science. (Eds: Demuth, M.N., Munro, D.S. and Young, G.J.) *National Hydrology Research Institute Science Report*. NHRI, Saskatoon.

Tribbeck, M J, Gurney, R J, **Morris**, E M and Pearson, D (2004 date expected) A new snow-SVAT to simulate the accumulation and ablation of seasonal snow cover beneath a forest canopy. *Journal of Glaciology*.

Tribbeck, M J, Gurney, R J and **Morris**, E M (In press) Simulation of snow accumulation and ablation beneath a fir canopy, snow pack profiles and sub-canopy radiation. *Journal of Hydrometeorology*.

Morris, E.M. and Mulvaney, R. (2004) Recent variations in surface mass balance of the Antarctic Peninsula Ice Sheet. *Journal of Glaciology*.

Morris, E M and Cooper, J D Density measurements in ice boreholes using neutron scattering. *Journal of Glaciology*. Vol 49 No 167 p. 599-604.

Shepherd, A , Z Du, **Morris**, E M, Benham, T J Growth of the Devon Ice Cap, *Arctic Canada* (re-submission?) J G R?

Hawley, R.L. and **Morris** E.M. (AGU paper) Borehole stratigraphy and neutron-scattering density measurements at Summit, Greenland.

Arnold, N.S. and **Rees**, W.G., Self-similarity in glacier surface characteristics. *Journal of Glaciology* 49 167 547-554.

Rees, W.G., Least-cost paths in mountainous terrain. *Computers and Geosciences* 30 203-209.

Rees, W.G., Tutubalina, O.V. and Golubeva, E.I. Reflectance spectra of subarctic lichens between 400 and 2400 nm. *Remote Sensing of Environment* 90 281-292.

Rees, W.G. *Naismith's Rule overhauled*. Scottish Mountaineering Club Journal 39, 666-669.

Shepherd, Andrew; Wingham, Duncan; Rignot, Eric Warm ocean is eroding West Antarctic Ice Sheet *Geophys. Res. Lett.*, Vol. 31, No. 23, L23402 10.1029/2004GL021106 09 December.

Payne, Antony J.; Vieli, Andreas; **Shepherd**, Andrew P.; Wingham, Duncan J.; Rignot, Eric Recent dramatic thinning of largest West Antarctic ice stream triggered by oceans *Geophys. Res. Lett.*, Vol. 31, No. 23, L23401 10.1029/2004GL021284 09 December.

Historical & Cultural Geography research cluster

Bayliss-Smith , T. P. 'Hunting and gathering societies, energy flows in'. In C.J. Cleveland (ed.) *The Encyclopaedia of Energy*. Academic Press and Elsevier Science, New York, 183-195.

Bravo, M. T, S. Sörlin et al., 'Theme 6: Social Sciences Content' in *A Framework for the International Polar Year 2007-2008*, Produced by the ICSU IPY 2007-2008 Planning Group, Pre-published online at www.ipy.org

Bravo, M. T., 'Mission Gardens: Natural history and Global Expansion, 1720-1820'. In L. Schiebinger and C. Swan (eds.), *Colonial Botany: Science, Commerce, and Politics*,

University of Pennsylvania Press, 49-65. ISBN 0-8122-3827-3. Table of Contents and Chapter Descriptions at <http://www.upenn.edu/pennpress/book/toc/14093.html>

Richards K. S., M. Bithell, and M.T. **Bravo**, "Space, time and science: Towards a Geographical Philosophy in J. Matthew (ed.) *Unifying Geography: Common Heritage, Shared Future*, 327-352. ISBN: 0415305446.

Bravo, M. T., 'William Edward Parry (1790-1855)', B. Lightman (ed.) *Dictionary of Nineteenth-Century British Scientists* Thoemmes Press, Bristol, Vol. 3, 1532-1537.

Bravo, M. T., 'James Rennell (1742-1830)', B. Lightman (ed.) *Dictionary of Nineteenth-Century British Scientists* Thoemmes Press, Bristol. Vol. 4, 1679-1683.

Bravo, M. T., 'James Clark Ross (1800-1862)', B. Lightman (ed.) *Dictionary of Nineteenth-Century British Scientists* Thoemmes Press, Bristol. Vol. 4, 1723-1724.

Cliff, A.D. *War Epidemics: A Geography of Infectious Diseases in Military Conflict and Civil Strife, 1850-2000*. (with M.R. Smallman-Raynor). Oxford: Oxford University Press, 805 pp.

Cliff, A.D. *World Atlas of Epidemic Diseases* (with P. Haggett and M.R. Smallman-Raynor). London: Arnold, 212 pp.

Cliff, A.D. 'Impact of infectious diseases on war' (with M.R. Smallman-Raynor). In *Infectious Diseases Clinics of North America: Historical Aspects of Infectious Diseases, Part II* (ed. B.A. Cuhna), **18**, pp. 341-68. Philadelphia: W.B. Saunders Company & Elsevier Science.

Cliff, A.D. 'Time, travel and infection' (with P. Haggett). *British Medical Bulletin*, **69**, pp. 87-99. (special issue: Cultures of health, cultures of illness, eds G.D. Smith and M. Shaw).

Cliff, A.D. 'The geographical spread of cholera in the Crimean War: epidemic transmission in the camp systems of the British Army of the East, 1854-5' (with M.R. Smallman-Raynor) *Journal of Historical Geography*, **30**, pp. 32-69.

Cliff, A.D. 'Disease and death during the South African War: changing disease patterns from soldiers to refugees' (with D. Low-Beer and M.R. Smallman-Raynor) *Social History of Medicine*, **17**, pp. 223-45.

Duncan, J. S. *Landscapes of Privilege: The Politics of the Aesthetic in an American Suburb*, New York: Routledge. (with N. Duncan) 256 pp.

Duncan, J. S. *A Companion to Cultural Geography*. Oxford: Blackwell. (Edited with N. Johnson and R. Schein) 520 pp.

Duncan, J. S. "Culture Unbound," *Environment and Planning A*: (with N. Duncan) Vol 36, pp. 391-403.

Duncan, J. S. "A paisagem como um sistema de significantes " In R. L. Corrêa and Zeny Rosendahl (eds.) *Paisagens, Textos e Identidade*. Rio De Janeiro: Editori da Universidade do Estado do Rio de Janeiro, pp. 91-132.

Duncan, J. S. "Introduction" (with N. Johnson and R. Schein) in *A Companion to Cultural Geography*. Oxford: Blackwell. (Edited with N. Johnson and R. Schein) pp. 1-8.

Duncan, J. S. "Landscapes of Home" (with D. Lambert) in *A Companion to Cultural Geography*. Oxford: Blackwell. (Edited with N. Johnson and R. Schein) pp. 382-403.

Howell, P. 'Industry and Identity: The North-South divide and the geography of belonging, 1830-1918', in Alan R.H. Baker and Mark D. Billinge (Eds) *The North-South Divide: Material and Imagined Geographies of England* (Cambridge, Cambridge University Press), 64-87.

Howell, P. 'Colonial law and legal historical geography: an argument from Gibraltar' in Alan R. H. Baker and Iain S. Black (Eds) *Home and Colonial: Essays on Landscape, Ireland, Environment and Empire in Celebration of Robin Butlin's Contribution to Historical Geography (RGS-IBG Historical Geography Research Series 39, 2004)*, 113-124.

Howell, P. 'Sexuality, sovereignty and space: law, government and the geography of prostitution in colonial Gibraltar', *Social History* 29, 444-464.

Howell, P. 'Race, Space and the Regulation of Prostitution in Colonial Hong Kong', *Urban History* 31.

Kearns, G. 'Mother Ireland and the revolutionary sisters,' *Cultural Geographies* 11 459-483 ISSN: 1474-4740

Kearns, G. 'The political pivot of history,' *Geographical Journal* 170 337-346 ISSN 0016-7398

Kearns, G. 'Environmental history,' in James Duncan, Nuala Johnson, Richard Schein (eds), *A companion to cultural geography* (Oxford: Blackwell,) 194-208 ISBN 0-631-23050-5

Schofield, R. *Taxation under the early Tudors*, Blackwell Publishing Ltd.

Smith, R. 'Geographers, Annaliste Historians and the roots and divergent pathways of English and French Historical Demography' in Agustin Gonzalez Encisco (ed) *Histories and historiographies: Post-War European Pathways* , 2004 (EUNSA, Pamplona), 167-186 '

Smith, R. 'Marriage migration and seigneurial restraint in rural England c. 1270-1360: Merchet, movers and villeinage' in P. Horden (ed) *Movement and Movers in medieval societies*, (Boydell and Brewer, Woodbridge, 171-193

Smith, R. 'European settings and response to the Black Death and AIDs scenarios in Africa: Some brief reflections' in *AIDS in Africa: Scenarios for the Future*, (United Nations, New York) 211-218

Affiliated, College, Research and Technical Staff

Regional Economy & Society Research Cluster

Law, J., and R. P. Haining (2004). "A Bayesian Approach to Modelling Binary Data: The Case of High-Intensity Crime Areas." *Geographical Analysis* 36, 197-216.

Environmental Processes Research Cluster

Thomson, A.G. & **Fuller, R.M.** An investigation of land use change in the Llyn Tegid catchment using satellite remote sensing. In: Gritten, R.H., Duigan, C.A. & Millband, H. (editors) *The ecology, conservation and environmental history of the largest natural lake in Wales*. Liverpool: University of Liverpool. 169-187.

Fuller, R.M., Smith, G.M. & Thomson, A.G., Contextual Analyses of Remotely Sensed Images for the Operational Classification of Land Cover in Great Britain. In S. de Jong & F. van der Meer (editors). *Contextual Methods in Image Processing of Remotely Sensed Data*. Dordrecht, Kluwer Academics.

McGonigle, A.J.S., Thomson C.L., Tsanev V.I., and Oppenheimer C., A simple technique for monitoring power station SO₂ and NO₂ emissions, *Atmos. Environ.*, 38, 21-25.

Oppenheimer, C., and **McGonigle A.J.S.,** Exploiting ground based optical sensing technologies for volcanic gas and aerosol surveillance, *Ann. Geophys.*

Mather, T.A., Tsanev V.I., Pyle D.M., **McGonigle A.J.S.,** Oppenheimer C., and Allen A.G., Characterisation and evolution of tropospheric plumes from Lascar and Villarrica volcanoes, Chile, *J. Geophys. Res.*, 109, D21303, doi:10.1029/2004JD004934.

Oppenheimer, C., Tsanev V.I., Allen A.G., **McGonigle A.J.S.,** Cardoso A.A., Wiatr A., Paterlini W., and de Mellos Dias C., NO₂ emissions from agricultural burning in Sao Paulo, Brazil, *Environ. Sci. Technol.*, 38, 4557-4561.

Mather, T.A., Oppenheimer C., Allen A.G., and **McGonigle A.J.S.,** Aerosol chemistry of emissions from three contrasting volcanoes in Italy, *Atmos. Environ.*, 38, 5637-5649.

McGonigle, A.J.S., Delmelle P., Oppenheimer C., Tsanev V.I., Delfosse T., Williams-Jones G., Horton K., and Mather T.A., SO₂ depletion in tropospheric volcanic plumes, *Geophys. Res. Lett.*, 31, L13201, doi:10.1029/2004GL019990.

McGonigle, A.J.S., Oppenheimer C., Tsanev V.I., Saunders S., Mulina K., Tohui S., Bosco J., Nahou J., Kuduon J., and Taranu F., Sulphur dioxide fluxes from Papua New Guineas volcanoes, *Geophys. Res. Lett.*, 31, L08606, doi: 10.1029/2004GL019568.

Oppenheimer, C., **McGonigle** A.J.S., Allard P., Wooster M.J., and Tsanev V., Sulfur, heat and magma budget of Erta Ale lava lake, Ethiopia, *Geology*, 32, 509-512, doi: 10.1130/G20281.

Mather, T.A., Allen A.G., Pyle D.M., Davison B.M., Oppenheimer C., and **McGonigle** A.J.S., Nitric acid from volcanoes, *Earth Plan. Sci. Lett.*, 218, 17-30.

Coutts, D.W., and **McGonigle** A.J.S., Cerium doped fluoride lasers, *IEEE J. Sel. Top. In Quantum Electron*, 40, 1430-1440.

McGonigle, A. J. S., Thomson, C. L., **Tsanev**, V. I. and Oppenheimer, C. A simple technique for measuring power station SO₂ and NO₂ emissions, *Atmospheric Environment*, Volume 38, Issue 1, Pages 21-25

Oppenheimer C., **Tsanev**, V, Allen, A.G., McGonigle, A.J.S., Cardoso, A., Wiatr, A., Paterlini, W., and De Mello Dias, C., NO₂ Emissions from Agricultural Burning in São Paulo, Brazil, *Environmental Science and Technology*, Volume 38, No. 17, pp 4557 – 4561. doi:DOI: 10.1021/es0496219

Oppenheimer, C., McGonigle, A.J.S., Allard, P., Wooster, M.J. and **Tsanev**, V.I. 1 Sulphur, heat and magma budget of Erta 'Ale lava lake, Ethiopia *Geology* Volume 32, No. 6, Pages 509-512. doi:10.1130/G20281

McGonigle, A. J. S., Oppenheimer, C., **Tsanev**, V. I., Saunders, S., Mulina, K., Tohui, S., Bosco, J., Nahou, J., Kuduon, J. and Taranu, F., Sulphur dioxide fluxes from Papua New Guinea's volcanoes, *Geophysical Research Letters*, Volume 31, L08606, doi:10.1029/2004GL019568

McGonigle, A. J. S., Delmelle, P., Oppenheimer, C., **Tsanev**, V. I., Delfosse, T., Williams-Jones, G., Horton, K., and Mather, T. A., SO₂ depletion in tropospheric volcanic plumes, *Geophysical Research Letters*, Vol. 31, L13201, 2004, doi:10.1029/2004GL019990.

Mather T.A., **Tsanev**, V.I., Pyle, D.M., McGonigle, A.J.S., Oppenheimer, C., Allen, A.G., Characterization and evolution of tropospheric plumes from Lascar and Villarrica volcanoes, Chile, *Journal of Geophysical Research*, Volume 109, No. D21303, doi:10.1029/2004JD004934

Ferdinandov, E., Dimitrov, K., **Tsanev**, V., Atmospheric Turbulence Influence over the Images of Space Objects - Mean Irradiance Distribution. (In Bulgarian) *Electrotechnics & Electronics*, Volume 39, Issue 3-4, 15-19.

Е. Фердинадов, Димитров К., Цанев В., Влияние на атмосферната турбулентност върху изображенията на космични обекти – разпределение на средната мощност. Електротехника и електроника (Е+Е), 2004, т.39, № 3-4, стр.15-19, 2004 г.

Ferdinandov, E., Dimitrov, K., **Tsanev, V.**, Atmospheric Turbulence Influence over the Images of Space Objects - Irradiance Fluctuations, *Electrotechnics & Electronics*, Volume 38, Issue 5, 24-31.

Е. Фердинатов, Димитров К., Цанев В., Влияние на атмосферната турбулентност върху изображенията на космични обекти – флуктуации на мощността. Електротехника и електроника (Е+Е), 2004, № 6, стр. 24-31, 2004 г.

Society, Environment & Development research cluster

Stammmler, F., The Commoditisation of Reindeer Herding in Post Soviet Russia: Herders, Antlers and Traders in Yamal, in: Segmentation und Komplementarität. Organisatorische, ökonomische und kulturelle Aspekte der Interaktion von Nomaden und Sesshaften. Orientwissenschaftliche Hefte Nr. 14, Halle (Saale): S. 105-122. (Mitteilungen des SFB "Differenz und Integration")

Glaciology and Quaternary Science research cluster

Dowdeswell, J.A., **Benham, T.J.**, Gorman, M.R., Burgess, D. and Sharp, M.J., 2004. Form and flow of the Devon Island Ice Cap, Canadian Arctic. *Journal of Geophysical Research*, v. 109, F02002, doi:10.1029/2003JF000095.

Betts, R. T. & **Boreham, S.** ' Evidence For A New Hoxnian Interglacial Site At School Field, Tednabury, Hertfordshire '. *Quaternary Newsletter*, 104, 2-11. Quaternary Research Association.

Boreham, S. ' The Structure and Formation of the Wandlebury Area ' *Proceedings of the Cambridge Antiquarian Society XCIII*: 5-8.

Briant R. M., Coope G. R., Preece R. C., Keen D. H., **Boreham S.** , Griffiths, H. I., Seddon M. B. & Gibbard P. L. ' Fluvial system response to Late Devensian (Weichselian) aridity, Baston, Lincolnshire, England. ' *Journal of Quaternary Science* , 19(5): 479-495.

Boreham, S. Holocene (Flandrian) organic deposits preserved in a lowland alder carr fen at Millpond Wood, Sevenoaks, Kent. *Quaternary Newsletter*, 102, 5-9. Quaternary Research Association.

Evans, J., Dowdeswell, J.A. and Ó Cofaigh, C., Submarine bedforms and former ice sheet flow in the Gerlache Strait and on the inner continental shelf, Antarctic Peninsula. *Journal of Quaternary Science*, 19, 397-407.

Ó Cofaigh, C., Dowdeswell, J.A., **Evans, J.**, Kenyon, N.H., Taylor, J., Mienert, J. and Wilken, M., Timing and significance of glacially-influenced mass-flow activity in the submarine channels of the Greenland Basin. *Marine Geology*, 207, 39-54.

Historical & Cultural Geography research cluster

Briggs, C. Empowered or marginalized? Rural women and credit in later thirteenth- and fourteenth-century England', *Continuity and Change*, 19

Garrett, E., Close to the truth or far from the fact? Reassessing vital statistics isomh individual data and nominal record linkage, Skye and Kilmarnock, 1861-1901' given at a symposium at the Centre for the History of Medicine, University of Glasgow entitled: 'Birth pangs and death throes: the creation of vital statistics in Scotland and England'.

Legg, S and Duncan, N "Social class" in J. Duncan, N. Johnson and R. Schein (Ed.s) *A Companion to Cultural Geography* Oxford, Blackwell Publishing

Legg, S "Review Essay: Memory and Nostalgia" *Cultural Geographies* 11: 99-107

Megoran, N. 'The critical geopolitics of the Uzbekistan-Kyrgyzstan Ferghana Valley boundary dispute, 1999-2000', *Political Geography*, 23 (6): 731-764.

Megoran, N 'Christianity and political geography: on faith and geopolitical imagination.' *Brandywine Review of Faith and International Affairs* 2 (2):40-46.

Megoran, N 'Revisiting the 'pivot': the influence of Halford Mackinder on analysis of Uzbekistan's international relations.' *Geographical Journal* 170 (4):347-358.

Barbi, E. and **Oeppen, J.** "Comparing the results from Generalised Inverse Projection and Stochastic Inverse Projection." In Barbi, E. *et al.* (Eds.) *Inverse Projection Techniques: old and new approaches.* Demographic Research Monographs, Springer.

Powell, R.C. "Polar Continental Shelf Project (PCSP)" in *Encyclopedia of the Arctic*, M. Nuttall (ed.), Routledge, London and New York, ISBN1-57958-436-5

Powell, R.C. "Resolute base" in *Encyclopedia of the Arctic*, M. Nuttall (ed.), Routledge, London and New York, ISBN1-57958-436-5

Reid, A. 'Child care and maternal health: intermediaries between socio-economic and environmental factors and infant and child mortality?' in Marco Breschi and Lucia Pozzi (eds.) *The Determinants of Infant and Child Mortality in Past European Populations.* Udine, Forum, pp.139-152.

Scott, H. "A mirage of colonial consensus: resettlement schemes in early colonial Peru" *Environment and Planning D: Society and Space* 22 (6) 885-899

Scott, H "Cultural turns", in J.S. Duncan, N.C. Johnson and R. Schein (Eds.) *A Companion to Cultural Geography* (Blackwell:Oxford) 24-37

Shaw-Taylor, L. 'Access to Land by Labourers and Tradesmen in Eighteenth Century England' in *Landholding and Land Transfer in the North Sea Area (late Middle Ages-19th Century)*, eds Bas J.P van Bavel and Peter Hoppenbrouwers.

Wrigley, E.A. *Poverty, progress, and population* (Cambridge). ISBN 0 521 82278 5.

Wrigley, E.A. 'British population during the 'long' eighteenth century, 1680-1840', in R. Floud and P. Johnson, eds., *The Cambridge economic history of modern Britain*, vol. 1, *Industrialisation 1700-1860* (Cambridge), pp. 57-95. ISBN 0-521-82036-7.

This document was created with Win2PDF available at <http://www.win2pdf.com>.
The unregistered version of Win2PDF is for evaluation or non-commercial use only.
This page will not be added after purchasing Win2PDF.