



Quaternary Research Association

CIRCULAR

FEBRUARY 2010

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Visit the QRA website at

www.qra.org.uk

Registered Charity no: 262124

This Circular is also available at:
<http://www.qra.org.uk>

1. SUBSCRIPTIONS AND MEMBERSHIP INFORMATION

Members are reminded that **subscriptions are due on January 1st**. Please pay promptly either by **STANDING ORDER** before this date or by **SENDING YOUR CHEQUE** punctually. In this way you are reducing the number of reminders and therefore postage costs. Overseas members who have difficulty paying by cheque or standing order can pay by visa (see website for details).

The subscription rates for QRA membership are as follows:

Ordinary Members	£20
Student, retired and unwaged members	£10
Institutional Membership	£35

Treasurer: Dr Peter Allen, 13 Churchgate, Cheshunt, Herts, EN8 9NB
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Membership of the Association will be terminated for non-payment of subscriptions.

Membership information, application, standing order and Gift Aid forms can be found on the QRA Website (www.qra.org.uk)

2. QRA EXECUTIVE COMMITTEE 2010

Following recent elections at the AGM (see below), the Executive Committee of the Quaternary Research Association for 2009 is as follows:

President:	Professor James Scourse (Bangor)	Jan 2011
Vice-President	Dr David Evans (Durham)	Jan 2013
Secretary:	Dr Pete Langdon (Southampton)	Jan 2014
Treasurer:	Dr Peter Allen	Jan 2013
Publications Secretary:	Dr Ian Candy (Royal Holloway)	Jan 2014
Editor, <i>Quaternary Newsletter</i> :	Dr Mark Bateman (Sheffield)	Apr 2012
Awards Officer:	Dr Siwan Davies (Swansea)	Jan 2013
Meetings Officer:	Dr David Roberts (Durham)	Apr 2011
Publicity Officer:	Dr Fabienne Marret (Liverpool)	Jan 2012
Outreach officer:	Dr David Anderson (Eton College)	Jan 2012
Conservation Officer:	Professor Cynthia Burek (Chester)	Jan 2013
Ordinary members:	Dr Eleanor Brown (Natural England)	Jan 2013
	Professor Chris Turney (Exeter)	Jan 2012
Editor, <i>JQS (ex officio)</i> :	Professor Antony Long (Durham)	Dec 2014
Postgraduate Representatives:	Helen Cockerton (Swansea)	Sept 2011
	Gunnar Mallon (Southampton)	Sept 2010

3. MINUTES OF THE 45th ANNUAL GENERAL MEETING OF THE QRA

Minutes of the 45th Annual General Meeting held in the Appleby Lecture Theatre, Department of Geography, University of Durham on 6th of January 2010 at 16.30 hours.

The President, Professor James Scourse chaired the meeting, which was attended by forty-five members of the Association:

Judy Allen, Peter Allen, Mark Bateman, Martin Bradley, Bob Bruce, David Bridgland, Dan Charman, Richard Chiverrall, Helen Cockerton, Alistair Curry, Siwan Davies, Dave Evans, Ian Evans, Derek Fabel, Trevor Faulkner, Callum Firth, Chris Fogwill, Mick Frogley, Roland Gehrels, Victoria Herridge, Jason Kirby, David Kumor, Harry Langford, Anthony Long, Barbara Maher, Fabienne Marret, Tony Massey, Colin Murray-Wallace (Australian Quaternary Association), Andy Plater, Dave Roberts, Helen Roe, Jim Rose, Ian Shennan, David Smith, Anthony Spencer, Iain Stewart, Chris Vernon, Rob Westaway, Tom White, Sarah Woodroffe and four others.

1. Welcome and apologies for absence

The President welcomed members to the meeting. Apologies were received from Cynthia Burek, Pete Langdon and Simon Lewis.

2. Minutes of the 44th Annual General Meeting

These were accepted as a correct record of the meeting.

3. Matters arising from the minutes

Item 4a. Radiocarbon Workshop bursaries. Three members had received bursaries for the workshop, which had been very successful. Contrary to our original expectation, the NERC Workshop is to operate every second year, with a workshop run by the Oxford Accelerator Laboratory on Oxcal and Bayesian modelling in the alternate years. The Executive are considering whether to support the latter workshop.

Item 4d. Quaternary Research Association website. In response to a question by Rob Westaway, the meeting was informed that the older, out of print, field guides were to be put on the website.

4. President's announcements

a) Deceased members. The President sadly reported the deaths of Steve Hitchin, Phillipa Holmes, Roger Jacobi and Clarence Kidson. It is hoped that forthcoming issues of *Quaternary Newsletter* will carry obituaries for Roger Jacobi and Clarence Kidson.

b) Affiliation to the Royal Geographical Society-Institute of British Geographers. This matter has been discussed by the Executive and a Memorandum of Understanding has been drawn up. The affiliation will not involve any philosophical change within the Quaternary Research Association (as is also the case for our affiliation with the Geological Society of London). There will be a number of gains, such as (i) free use of a room for Executive meetings, twice a year, (ii) use of rooms for workshops, conferences, etc at a preferential (charity) rate, (iii) a prestigious permanent address from which mail will be forwarded as appropriate, (iv) QRA members will be have use of the Foyle Reading Room (a one-off fee may need to be paid). The RGS-IBG will benefit from the affiliation, strengthening its profile in physical geography. Copies of the Memorandum of Understanding were circulated. The membership agreed unanimously to accept the Memorandum.

c) Senior medal (James Croll Medal). The President proposed that a medal be awarded to active, distinguished senior members of the Association with international reputations. After discussion, it was agreed that the medal is to be known as the James Croll Medal and will have a standing equal to

the prestigious awards of the Geological Society and the Royal Geographical Society. The medal will be silver with gold gilt. It will cost c.£2600 to set up and c.£250-£300 per medal thereafter. The proposal was universally accepted by the membership.

d) QRA Executive Committee. The President noted that a number of members of the Executive Committee were completing their terms of office at this meeting. In particular Chris Caseldine was thanked for his editorship of the *Journal of Quaternary Science*, which now was more buoyant and financially viable. He thanked the retiring members of the Executive, Barbara Maher, Martin Bates, Jonathan Lee and in particular Pete Langdon (as Publications Secretary, now moving to Secretary), Mick Frogley (Awards Officer) and Simon Lewis (Secretary).

5. Honorary Members of the QRA

The President announced that two members had been nominated by the Executive for Honorary Member status : Keith Barber (Southampton) and Colin Whiteman (Brighton). These nominations were accepted unanimously by the membership.

6. Annual Report of the Secretary

This report covers the period January – December 2009.

a) Membership

Total membership of the Association stands at **1030**, a slight net increase for the year.

Census date Category	15/04/04	21/03/05	29/3/06	29/3/07	01/01/08	01/01/09	14/12/09	Change (08-09)
Ordinary Members	600	583	599	562	573	545	564	+19
Postgraduate Members	220	204	231	223	269	269	247	-22
Unwaged/Retired Members	106	131	126	131	137	140	145	+5
Honorary members	17	18	15	16	19	22	26	+4
Institutional members*	43	41	40	36	41	33	33	
Corresponding members	15	14	14	14	14	16	15	-1
Total Membership	1001	991	1025	982	1053	1025	1030	+5

*Includes copyright member

Subscriptions for 2009 were unchanged at £20, with a reduced rate of £10 for students and unwaged members. The institutional membership rate is £35. Val Siviter, the QRA's administrator deals with management of the membership database. On behalf of the QRA I would like to thank Val for her continuing hard work for the Association.

Honorary Members

Four distinguished scientists were elected as Honorary Members of the Quaternary Research Association at its AGM, held in Oxford in January 2009; Dr Ian Evans (Durham), Professor Charles Harris (Cardiff), Professor Marshall McCabe (Ulster) and Dr Geoffrey Thomas (Liverpool). Citations were published in *Quaternary Newsletter*, number 117 (February 2009).

A list of Honorary Members of the QRA can be found on the website: www.qra.org.uk

b) Meetings

i) Annual Discussion Meeting: The QRA Annual Discussion Meeting: The human dimension in rapid environmental change, 5th-7th January 2009.

Organisers: Simon Blockley, Nick Barton, Christopher Bronk-Ramsey, Peter Ditchfield, Christine Lane, Mark Pollard, Anna Oh.

ii) Field Meeting: The Quaternary of the Solent and West Sussex, 4th-8th April 2009

In conjunction with the Prehistoric Society.

Organisers: Becky Briant, Martin Bates, Rob Hosfield, Francis Wenban-Smith
Report: *Quaternary Newsletter*, no. 118 (June 2009).

iii) 8th International Postgraduate Symposium, August 2009

University of Manchester

Organisers: Deborah McCormack, Rose Wilkinson

The QRA also co-sponsored, with the Geologists Association, a field meeting: "In the footsteps of Charles Darwin" to the Midlands and North Wales, 19th-24th June 2009. The meeting was organised by Peter Worsley. A report on this meeting appeared in *Quaternary Newsletter* no. 119.

The **John Wiley Lecture** for 2009 was delivered during the Annual Discussion Meeting at the University of Oxford by F. D'Errico (Institut de Préhistoire et de Géologie du Quaternaire, CNRS, France) on "How to assess the impact of the MIS 2-3 rapid climatic variability on human populations".

The Executive Committee extends its thanks to the many people who organised meetings, supported the meetings through their participation, and who reported on these activities in *QN* for the information of the wider membership.

c) Publications

Quaternary Newsletter:

3 issues: 117 (Feb 2009), 118 (June 2009), 119 (October 2009)

Editor: Dr Mark Bateman (University of Sheffield)

Journal of Quaternary Science (<http://www3.interscience.wiley.com/journal/2507/home>)

Volume 24, 8 issues, containing seventy eight research papers.

Editor: Professor Chris Caseldine (University of Exeter)

Volume 24 (5) **Special Issue:** Climates of the past: evidence from natural and documentary archives

Guest Editors: I. Robertson, C.A. Froyd, M. Gagen and S. Hicks

Volume 25 (8) **Thematic Set:** Palaeocoenography of the Western Pacific and marginal seas

Guest Editors: Tadamichi Oba, Ken Ikehara and Chris Turney

Chris Caseldine completed his term as Editor of *JQS* at the end of 2009. On behalf of the QRA, I would like to thank him for his hard work to ensure the continued development of *JQS* as an international research journal with a strong profile and rising impact factor. The new Editor Professor Antony Long (Durham) takes over at the start of 2010.

QRA Field Guides

Two field guides were published in 2009: *The Quaternary of the Solent and West Sussex Raised Beaches* was produced to accompany QRA field meetings in 2008 and *The Quaternary of the Trent Valley and adjoining regions* was published following the 2007 field meeting to that area.

Quaternary Abstracts

This new series, which bears an ISSN, is for publication of abstracts volumes from discussion meetings. The Abstracts volume for the 2009 ADM held at Oxford "**The human dimension in rapid environmental change**" is the first in this series.

The publication of field and technical guides continues to form an important part of the Association's activities and play a major role in raising the profile of the QRA and promoting Quaternary science research. Suggestions for topics for new technical guides or localities for field meetings and accompanying guide books and volunteers to write/edit them are most welcome.

See the Publications Secretary's report for further details.

d) QRA Grants and Awards

During the financial year 2008-9, **£14,230** was disbursed by the QRA to **50** members under its awards schemes.

1. Standard Grants

Fund	No. of applications		No. funded	Total monies requested ¹ (£)	Total monies awarded (£)
NRWA	Sept 08	7	6	4000	1750
	Jan 09	4	4	2498	1600
	May 09	8	6	4176	2000
	Total	19	16	10,674	5,350
QCF	Sept 08	11	8	2666	1380
	Jan 09	3	3	1162	750
	May 09	8	6	2585	1335
	Total	22	17	6,413	3,465
QRF	Sept 08	5	3	2628.93	700
	Jan 09	2	2	1045	800
	May 09	6	5	3500	2000
	Total	12	10	7173.93	3500
PGMA	Sept 08	–	–	–	–
	Jan 09	1	1	130	130
	May 09	–	–	–	–
	Total	1	1	130	130
TOTAL	54*		44	24,390.93	12,445

¹ Refers only to eligible applications.

* Of 54 total applications, only 48 were eligible for consideration (of which 44 were funded)

2. Special Grants

Fund	No. of applications	No. funded	Total monies requested (£)	Total monies awarded (£)
Bill Bishop	2	1	750	750
C14 Bursary	3	3	1035	1035
QRA/RLAHA	3	1	–	–
L. Penny 09	2	1	–	–
Total	10	6	1,785	1,785

3. Lewis Penny Medal 2009

The fourth Lewis Penny Medal was awarded to Dr Tom Bradwell (BGS, Edinburgh) in recognition of his work on the glacial history of Scotland and the adjacent continental shelf and, in particular, for helping to improve our understanding of the dynamics of the last British-Irish Ice Sheet. Tom was presented with the medal and £100 prize money by the President of the QRA, Professor James Scourse, at the Annual General Meeting in Oxford, in January.

4. C14 Bursaries

This year saw the successful launch of the new bursary scheme supporting members' attendance at the NERC/AHRC short course on radiocarbon dating. Three postgraduate student members were able to take advantage of this scheme in 2009; the next short course will be held in 2011.

Full details of all QRA awards are available on the QRA website and are also published in the Circular.

AWARDS 2008–2009

New Research Workers' Award

Clare BOSTON	Queen Mary	Attendance of the 'Arctic Terrestrial Quaternary Stratigraphy' course, run by the University Centre in Svalbard.	300
Emily COFFEY	Oxford	Determination of baseline ecological conditions in the Galapagos Islands.	400
Amanda FERGUSON	Queen Mary	Polyphase deformation in subglacial tills of North Wales.	250
Rajasmita GOSWAMI	Manchester	Submarine geomorphology and links between onshore and offshore erosion in the Ionian Sea, Italy.	400
Alessio GUSMEROLI	Swansea	Geophysical fieldwork in Arctic Sweden.	350
Karolina LESZCZYNSKA	Cambridge	Pleistocene glaciogenic deposits in Essex, England.	250
Iain LEIGHTON	Swansea	A sedimentological field study in South Iceland into subglacial processes associated with fast-flow glacial systems.	550
Jonathan LEWIS	Loughborough	Holocene environmental change in coastal Denmark: linking sea and society.	250
Antonia LIVERSIDGE	Loughborough	Palaeohydrological reconstruction of abrupt climate events in southwest Greenland during the Holocene.	400
Lauren MANSELL	Queen's, Belfast	Floodplain interactions and palaeoecology: implications for wetland ontogeny and Holocene climate change.	300
Hayley MILLS	Liverpool	210-Pb dating of a saltmarsh sediment core.	250
Alexander PRYOR	Cambridge	What were the behaviours and adaptations that enabled Palaeolithic groups to survive the coldest parts of the last ice age in Europe, 50-20kya?	250
Hazel READE	Royal Holloway	A palaeoenvironmental study from the Hoogland karstic system, South Africa.	300
Ann ROWAN	Manchester	The influence of glacial-interglacial climatic variations on coarse-grained braided river deposits.	200
David SMALL	St Andrews	Tracking the last glacial termination in Western Scotland: integrating onshore and offshore evidence for deglaciation.	300
Kevin WOODBRIDGE	Hull	Optically stimulated luminescence dating of sediments from SW Iran.	600
Quaternary Conference Fund			
Natasha BARLOW	Durham	GSA Annual Meeting, Portland, USA, October 2009.	200
Rochelle CAMPBELL	Swansea	AGU, San Francisco, USA, December 2009.	350
Frank CHAMBERS	Gloucestershire	Peatland archives of Holocene climate variability, Vihula, Estonia, May 2009.	175
Dan CHARMAN	Plymouth	Peatland archives of Holocene climate variability, Vihula, Estonia, May 2009.	175
Tim DALEY	Swansea	Peatland archives of Holocene climate variability, Vihula, Estonia, May 2009.	175
Julie DURCAN	Aberystwyth	2nd Asia Pacific Luminescence and ESR Dating Meeting, India, November 2009.	200
Stephen FORDEN	Queen Mary	EGU, Vienna, Austria, April 2009.	250
Cynthia FROYD	Oxford	Darwin's Birthday and 50 Years of Conservation in the Galapagos, Galapagos, July 2009.	200
Bas van GEEL	Amsterdam	Peatland archives of Holocene climate variability, Vihula, Estonia, May 2009.	175
Paul HUGHES	Southampton	Peatland archives of Holocene climate variability, Vihula, Estonia, May 2009.	175
Fraser MITCHELL	TCD	Peatland archives of Holocene climate variability, Vihula, Estonia, May 2009.	175
Colin O'COFAIGH	Durham	Workshop on the frequency and timing of glaciations in northern Europe (including Britain) during the Middle and Late Pleistocene, Berlin, February 2009.	150

Virginia PANIZZO John STEWART	UCL Natural History Museum Keele	11th International Paleolimnology Symposium, Mexico, December 2009. Caipé 09: Human Evolution, 150 Years After Darwin, Gibraltar, September 2009.	250 185
Katie SZKORNIK		6th International IGPP 495 (Quaternary Land-Ocean Interactions, Driving Mechanisms and Coastal Responses), Conway, USA, October 2009.	200
Sarah WOODROFFE Fengling YU	Durham Durham	AGU, San Francisco, USA, December 2008. EGU, Vienna, Austria, April 2009.	180 250
Quaternary Research Fund Sara BENETTI	Ulster	Reconstruction of the glacial/deglacial history of the Malin Shelf sector of the former British-Irish Ice Sheet.	400
Simon BLOCKLEY Edward CONNELL John HIEMSTRA Simon LEWIS Gina MOSELEY Richard PAYNE Danielle SCHREVE Thomas STEVENS Bronwen WHITNEY	Royal Holloway Aberdeen Swansea Queen Mary Bristol Manchester Royal Holloway Royal Holloway Nottingham	Reinvestigating Holocene and Late Pleistocene lake deposits at Star Carr. Stratigraphical investigations at three sites in Buchan, NE Scotland. Late Quaternary history of Shetland: unravelling the sedimentary record. A reinvestigation of the Chapel Hill Sands, Norwich, Norfolk. Comparison of multiple dating techniques as a tool for cave and landscape evolution. A peat-based proxy-climate record from western Georgia. Palaeoenvironmental investigations at Gully Cave, Ebbor Gorge, Somerset. Characterising sedimentation down the Monterey Bay submarine canyon. A preliminary investigation of the Sarstoon-Temash peatland, southern Belize.	250 200 250 400 400 400 400 350 450
Postgraduate QRA Meetings Award Faith CAIRNS	Newport	QRA Field Meeting: The Solent Basin & West Sussex, April 2009.	130
Radiocarbon Short Course Bursary Tivadar GAUDENYI	Novi Sad, Serbia	Palaeoenvironmental reconstruction of Late Pleistocene loess-palaeosol sequences of south-eastern Europe.	315
David REYNOLDS Thomas ROLAND	Bangor Exeter	Sclerochronology of long-lived bivalve molluscs: a multi-species approach for palaeoenvironmental reconstructions from the west of Scotland. Investigating human responses to past climatic change.	360 360
Bill Bishop Award Lisa MOL	Oxford	Using ERT to assess the impact of internal moisture behaviour on weathering of the Clarens Sandstone in the Golden Gate Reserve, South Africa.	750
QRA-RLAHA Luminescence Dating Award Anne BRIDLE	UWE	A high-resolution reconstruction of Pleistocene environments in the Gordano Valley, North Somerset.	
Lewis Penny Medal 2009 Tom Bradwell	BGS Edinburgh		

e) **Research Groups and Study Groups**

The Research Group scheme is designed to provide a small quantity of start-up funding over a three year period for specialist Quaternary research groups, with the aim to bring research communities together, foster communication and provide an opportunity for new research projects to be formulated. The scheme has launched a number of significant research collaborations. The QRA currently supports one research group, which comes to the end of its three-year period at the end of 2009.

IBiS (Isotopes and Biogenic Silica Research Group)

Established in 2006, its aims include promotion of the study of all forms of biogenic silica and their role in biogeochemical cycling at ecosystem to global scales, advancement of the techniques for the study of biogenic silica, widening access to existing equipment, knowledge and expertise, promotion of interdisciplinary collaboration by identifying foci for future research initiatives and establishing a forum for the exchange of ideas and information. The convenor is Prof. F. Alayne Street-Perrott (Swansea). <http://www.bgs.ac.uk/ibis/home.html>

New proposals for research groups are invited at any time. Ideas and proposals for new research groups may be discussed with the Secretary. These will be put to the membership for approval at the Annual General Meeting.

Study Groups were established with the purpose of enabling small groups of researchers to be associated with the QRA. Study Groups do not receive any funding from the QRA. Anyone interested in forming such a group should contact the Secretary.

f) **Outreach**

As a registered charity outreach is an important part of our activities and David Anderson, our Outreach Officer continues to make considerable progress with this area of QRA activity. The outreach web pages are being continually improved and updated (<http://qra.org.uk/outreach.htm>).

i) **QRA Undergraduate Dissertation Prize**

The prize attracted an impressive field this year, consisting of 16 entries, all of a high standard. The winner of the £250 prize for 2009 is Mark Grosvenor (University of Exeter) for his dissertation: "Palaeoclimatic implications of tephra at a new site within the Menteith moraine of the Loch Lomond Readvance Glacier". An abstract of the winning dissertation will be published in a forthcoming *Quaternary Newsletter*. Professors David Smith and Geoff Thomas are thanked for judging this year's entries.

ii) **Outreach webpages**

More educational links, resources and talks of general interest have been added to the outreach pages.

iii) **Outreach connected with QRA field meetings**

A Visitors' Guide to the geology at Lepe Country Park, Hampshire (by Becky Briant) and a Teachers' Worksheet have been produced and are available at the Lepe park office and can be downloaded from the website. We have also donated field equipment to the park office for school groups to use.

iv) **RGS-IBG School Ambassador Scheme**

The Ambassador Scheme was advertised at the post-graduate conference.

v) **Outreach sponsorship**

A donation of £1000 has been made to support the production and distribution of posters on climate change (past and future) to schools in Wales (243 schools will receive them, the QRA logo will be displayed, a brief write-up of the sponsorship will appear in QN).

g) Joint Association for Quaternary Research

At its Annual General Meeting in 2009 a proposal was discussed to dissolve the JAQR to allow direct affiliation of the QRA with the Geological Society. A vote was taken and the proposal was approved. The JAQR has therefore been dissolved. The QRA Executive has applied to the Geological Society for affiliated status. I would like to thank all those officers of the JAQR who worked hard to maintain an active link with the Geological Society and the QRA can look forward to developing these links in the future.

h) Executive Committee

Six members of the Executive committee complete their terms of office in January 2010:

Professor Barbara Maher (Vice President)

Dr Simon Lewis (Secretary)

Dr Pete Langdon (Publications Secretary)

Dr Mick Frogley (Awards Officer)

Dr Martin Bates (Conservation Officer)

Dr Jonathan Lee (Ordinary Member)

We also welcomed a new postgraduate representative on to the Executive Committee in September, Helen Cockerton (Swansea University), who will represent the QRA postgraduate community for the next two years.

i) Postgraduate activities

Postgraduate activities continue to be an important part of the activities of the Association. The annual postgraduate symposium series continued, with the 2009 event held at the University of Manchester from 25th-28th August. It was attended by 40 delegates from the UK, Ireland and France and 34 presentations (28 oral and 6 posters), ranging widely in subject, were given over the course of two days. Postgraduates are represented on the Executive Committee and make an important contribution to the Executive on behalf of the postgraduate community.

j) Publicity

The main activity in this area of the Association's work was the launch of the new QRA web site in January. This is a major development in our on-line activity and provides a professional web presence for the QRA. The web site is now the main repository of information concerning the organisation and activities of the QRA and continues to be a vital part of the QRA's publicity effort. The new website also houses a password-protected members directory, which is available to all members of the QRA. Members can also edit their own details in the directory. During 2009 the Executive Committee considered plans for phase 2 of the development of the website, again using a professional web development company. This will be rolled out during 2010.

The Secretary's report was accepted by the membership.

7. Treasurer's Report, 2008-2009

This Report covers the period 1 August 2008 to 31 July 2009

a) Income

Pleasingly, income from membership subscriptions rose by £1,192 to £15,652. This is due to the diligence of our Administrative Assistant, Val Siviter.

The surplus on meetings (£3,765.96) is something of a one-off, with £2,839 coming from the 2008 ADM at the Royal Geographical Society and £927 coming from the 2008 Northern East Anglia AFM. Normally we anticipate only a break-even on such events, but both meetings attracted far higher numbers than expected.

Royalties from Wiley rose by nearly £4000, to £33,328, again a pleasing and welcome increase.

Two items are temporary and need to be discounted for longer term planning. Firstly, £4,885 was received from the Royal Society as their normal contribution to our subscription to INQUA, but we have not been able to pass on the money to INQUA due to banking difficulties. Secondly, given the unsettled nature of the banking system in 2008, we closed our HBOS Deposit Account (£16,642) with a view to putting the money in another account. Again progress has been slow, but an account has now been opened with HSBC and the money will be transferred there later this month (January 2010). Taking these into account, the income from sources other than Membership Subscriptions and Publications should be £38,135.25.

b) Expenditure

Our running expenditure is reasonably close to that of last year, though overall there was a rise of c £1,000, to £17,770. The most notable increase was of £991 in the Executive Committee (EC) expenses. This, however, was a return to previous levels. Costs vary according to where EC members travel from. Usually only travel is claimed; very little is spent on subsistence. Approximately 3% of our overall income goes to EC expenses.

Publications expenditure rose by c.£3,600, but this account does fluctuate markedly, depending on the number of publications printed each year. A fuller report is presented by the Publications Secretary.

Given the rises in income we were able to raise the amount of money used for awards and other forms of support, by £5,775, to £17,077. A welcome new initiative has been to allocate £1,438 to our Outreach activities, this year mostly to providing equipment, books and leaflets to the Lepe Country Park, in association with our AFM visit there (Easter 2009). Further sums have been set aside to support delegates attending INQUA meetings.

A major outlay during the year was £7,702, for setting up our new website.

Overall, the total expenditure rose from £44,218 to £59,689. This increase is mostly accounted for by the higher print costs for publications, more generous awards and setting up our revised website.

c) Income versus Expenditure

Running costs were £17,770 against a membership subscription income of £15,652, a deficit of £2,118.

Of this c.£650 would formerly have been debited to the Publications Account, leaving a comparable deficit of £1,468. In future, we will be sending out the Circular in a reduced format, which should save us c.£1000 a year in printing and postage costs. We are also considering setting up a Gift Aid scheme, which could increase our income hopefully by c.£2,000.

These measures should bring our running costs into line with membership income and avoid the need to have a subscription increase.

d) Year-end financial status

At the end of July 2009, we held £94,256.81 in our Treasurer's Account, £11,841.97 in the Publications Account and £0.00 in our Deposit Account.

From this approximately £9,350 has to be paid to INQUA as our subscription for 2009 and £1,935 is outstanding in uncashed cheques.

£15,254.52 is held in trust for the Bill Bishop Awards. Further sums are ring-fenced: £5,000 to produce interest for the Lewis Penny Medal, £20,000 to meet any unexpected liabilities.

e) Future initiatives

The membership should note that we shall be starting the applications round for the next INQUA meeting shortly. We anticipate making £16,000 available to send delegates to the 2011 meeting, in addition to monies received from the Royal Society.

f) Balance Sheet: Income and Expenditure

Quaternary Research Association (Registered Charity No. 262124)					
<i>Income and expenditure on Treasurer's Account for 1 August 2008 - 31 July 2009.</i>					
INCOME				2007 - 8	2008 - 9
Member subs (Treasurer's acct only)				12670.21	14945.00
Member subs (Publications acct only)				1790.00	707.80
Total Running Income				14460.21	15652.80
Book sales				10266.73	8677.27
Transfer from Treasurer's Acct				0.00	0.00
Total Publications Income				10266.73	8677.27
Surplus on Meetings				172.39	3765.96
Interest Received on Treasurer's acct				885.76	330.79
Interest received on Publications acct				197.35	71.77
Interest received on Halifax deposit acct				398.52	0.00
Royal Society: INQUA Subscription Support				3485.00	4885.00
Royal Society: support for delegates to INQUA Conf				0.00	0.00
Publisher's Royalties Received				29562.00	33328.00
Meetings receipts: Quaternary Research Assoc				0.00	0.00
Returned grants				0.00	250.00
Donations				340.62	388.44
Transfer of Deposit A/c to Current A/c				0.00	16642.29
Other income				423.00	0.00
Total Other Income				35464.64	59662.25
TOTAL INCOME ON BOTH ACCOUNTS				60191.58	83992.32
EXPENDITURE					
Newsletter & Circular printing costs				4977.00	4633.00
Newsletter & Circular postage & stationery				0.00	2808.06
Admin support				5686.75	6161.25
Postage & stationery				4114.27	985.68
Executive Committee Meetings				1305.89	2296.21
Other Exec expenses				0.00	256.45
Insurance				630.00	630.00
Bank Charges					
Total Running Expenditure				16713.91	17770.65
Publications Account					
Printing				3400.00	12734.00
Postage				0.00	0.00
Bank charges				195.46	188.98
Sub-Committee Expenses				0.00	0.00
Stationery				0.00	0.00
Miscellaneous				10.00	18.00
Refunds					
Total Publications Expenditure				3605.46	12940.98
Grants/Awards/Support					
Research Grants	NRWA			3060.00	6550.00
	QRF			3280.00	2880.00
	QCF			2350.00	3050.00
	QRA Conf Fund			50.00	0.00
Support for delegates to INQUA Congress, Australia				600.00	0.00
C14 bursaries				0.00	1035.00
Lewis Penny Award				0.00	468.80
Lewis Penny Award (engraving)				21.85	19.97
Bill Bishop Memorial Fund Award				700.00	750.00
Postgraduate Conference advance				0.00	505.00
Postgraduate Meetings Award				0.00	130.00
Undergraduate Dissertation Award				0.00	250.00
Outreach				0.00	1438.66
IBiS				240.94	0.00
Royal Society Exhibition support				1000.00	0.00
Total Grants/Awards/Support				11302.79	17077.43
Refund/reimbursement				2975.00	70.00
Meetings expenditure				1108.33	1238.89
RGS ADM 2008, Payment				0.00	2839.30
INQUA subscription				7574.67	0.00
Web Site costs				438.27	7702.50
Other expenditure				500.00	50.00
Total other expenditure				12596.27	11900.69
TOTAL EXPENDITURE ON BOTH ACCOUNTS				44218.43	59689.75
NET SURPLUS(+)/DEFICIT(-)				+ 15973.15	+ 24302.57
P. Allen	Treasurer				
04/01/2010					

g) Assets and Liabilities at 31 July 2009

ASSETS

July 2008		July 2009
£ 63630.80	Bank of Scotland Treasurer's Account	£ 94256.81
15326.11	Bank of Scotland Publications Account	11841.97
16347.97	Halifax Treasurer's Account	0.00
95304.88	Total Monetary Assets	106098.70
£ 95304.88	TOTAL ASSETS	£ 106098.78

LIABILITIES

£ 2984.50	Uncashed cheques (Treasurer)	£ 1935.00
	INQUA Subscription (10162 Euros)	9350.00
2984.50	Total Liabilities	11285.00

77065.86	Total Net Assets – Unrestricted	79559.26
15254.52	Total Net Assets – Restricted	15254.52
£92320.38	TOTAL NET ASSETS	£ 94813.78

Dr P. Allen
Treasurer

Date 4/01/10

The Treasurer's report was accepted by the membership.

8. Publications Secretary Report

a) Publication Activity 2009.

i) Field Guides

Two field guides were published in 2009: *Trent Valley* (White et al.) which was from a short field meeting in 2007, and the *Solent Basin* (Briant et al.) guide associated with the 2009 Easter field meeting.

ii) Technical Guides

No technical guides were printed in 2009 although some progress has been made:

A users guide to Fungal Palynomorphs (Blackford & Innes) has suffered delays due to recently discovered changes in mycology systematics and taxonomy but is nearly ready for printing.

Modelling Pollen Dispersal and Deposition: the PolLandCal approach (Bunting et al) has suffered delays due to illness of key authors.

Tephrochronology: Theory & Practice (Blockley & Lowe). Editorial base has been broadened and chapters/authors invited.

Clast [Lithological] Analysis (Bridgland). This next edition of the old TG3 is nearly there now, just a few outstanding chapters, and hopes to be completed in early-mid 2010.

b) Sales

Sales for 2009 (excluding late December) are 541, an excellent performance with x2 guides published. An important point to note is that both the new and reprinted TGs sell very well. Previous data are shown below for comparison:

Total sales over the last 5 years:	2009	541
	2008	455
	2007	554
	2006	430
	2005	471

Itemised sales are shown below:

Publications mail order sales Jan-early Dec (inclusive) 2009 (excludes field meeting sales, bookstalls etc)

Title	Date	Editor(s)	Copies sold 2009	No. of copies held (Val)
Field Guides				
Solent Basin	2009	Briant et al.	34	181
Northern East Anglia	2008	Candy et al.	55	145
Glen Roy & Vicinity	2008	Palmer et al.	48	152
North of Ireland	2008	Whitehouse et al.	78	100
Trent Valley	2007	White et al.	25	175
Brecon Beacons	2007	Carr et al.	17	220
Somerset	2006	Hunt & Haslett	12	192
Scilly	2006	Scourse	21	178
Rossendale	2005	Crofts	4	200
Quaternary of Central Western Ireland	2005	Coxon	28	94
Nene Valley	2005	Langford & Briant	4	191
Quaternary Mammals of S & E England	2004	Schreve	11	99
Central Grampian Highlands	2004	Lukas et al.	4	210
Isle of Man & North West England	2004	Chiverrell et al.	12	217
Glen Affric & Kintail	2003	Tipping	4	250
W. Highland Boundary	2003	Evans	6	95
South-West Ireland	2002	Harrison & Mighall	5	139
Central Germany (Thuringia)	2002	Meyrick & Schreve	3	51
East Yorkshire & North Lincolnshire	2001	Bateman et al.	12	113
West Wales	2001	Walker & McCarroll	5	57
Banffshire Coast and Buchan	2000	Merritt et al.	10	100
Dumfries & Galloway	1999	Tipping	5	116
West Cornwall	1999	Scourse & Furze	3	54
North East England	1999	Bridgland et al.	5	121
Kent & Sussex	1998	Murton et al.	4	100
South Midlands & Welsh Marches	1997	Lewis & Maddy	4	168
Islay & Jura	1997	Dawson & Dawson	2	107
Devon & East Cornwall	1996	Charman et al.	4	115
Cairngorms	1996	Glasser & Bennett	2	216
Orkney Isles	1996	Hall	1	0
Lower Reaches of the Thames	1995	Bridgland et al.	0	0
Cumbria	1994	Boardman & Walden	1	42
Jersey	1993	Keen	2	152
Shetland Isles	1993	Birnie et al.	2	1
Central East Anglia & the Fen Basin	1991	Lewis et al.	3	14
Beaulieu to Nairn	1990	Auton et al.	3	2
Technical Guides				
No.7 Stratigraphic field sections (2)	1999	Jones et al.	25	188
No.8 Non-marine ostracods	2000	Griffiths & Holmes	4	360
No.9 Id of Testate Amoebae in peats	2000	Charman et al.	20	274
No.10 Chironomids	2007	Brooks et al.	52	115
QP 6 Mountain Glaciation			1	154

c) QRA Publications Account

Activity on the QRA Publications account from August 2008 – July 2009 is summarized below:

2008-09	<i>Credit</i>				<i>Total Credit</i>	<i>Debit</i>				<i>Total Debit</i>	<i>Running Balance from 01.08.08</i>
	<i>Interest Current</i>	<i>Book sales</i>	<i>Misc.</i>	<i>Memb.-ship</i>		<i>Print Costs</i>	<i>Refund</i>	<i>Misc.</i>	<i>BoS charges</i>		
Aug-08	13.97	151.00	0	80.00	244.97	0	18.00	0	10.00	28.00	15543.08
Sept	15.97	268.20	0	185.00	469.17	0	0	0	10.00	10.00	16002.25
Oct	13.45	0.00	0	0.00	13.45	3135.00	0	0	10.00	3145.00	12870.70
Nov	9.30	451.99	0	310.00	771.29	0	0	0	10.00	10.00	13631.99
Dec	9.12	0.00	0	0.00	9.12	5690.00	0	0	10.00	5700.00	7941.11
Jan-09	2.25	196.68	0	717.80	916.73	0	0	0	10.00	10.00	8847.84
Feb	2.32	1876.00	0	570.00	2448.32	0	0	0	16.48	16.48	11279.68
Mar	1.18	1523.20	0	480.00	2004.38	0	0	0	18.10	18.10	13265.96
Apr	1.09	1643.70	0	330.00	1974.79	0	0	0	53.79	53.79	15186.96
May	1.09	0.00	0	0.00	1.09	3909.00	0	0	17.59	3926.59	11261.46
Jun	1.02	316.50	0	285.00	602.52	0	0	0	10.00	10.00	11853.98
Jul	1.01	1004.73	0	0.00	1005.74	0	0	0	13.02	13.02	12846.70
totals	71.77	7432.00	0.00	2957.80	10461.57	12734.00	18.00	0.00	188.98	12940.98	

Point to note:

- BoS charges include the use of our credit card facility (£10 minimum)
- The balance is reasonably high due to a balance transfer of £5,000 from the main account last year in anticipation of more TGs being published. When the TGs are published (hopefully x2 in 2010) this will make an initial dent in the balance, but should be recouped over following years due to high sales of these guides.
- The print costs look slightly out of place compared with book sales, but x3 guides were printed in this financial year, whereas we tend to break even on guides over a longer period (e.g. only x2 guides printed in 2009).

d) Future activities

A number of issues are being discussed within the publications sub-committee which the new post holder will take forward. These include the digitisation of QN and old/out of print FG/TGs and how we will run the publications within the framework of future website developments (e.g. online sales etc).

The Publication Secretary's report was accepted by the membership.

9. Quaternary Research Association meeting programme

The following meetings have been arranged or are proposed:

a) 2010

5 - 8 Jan 2010

Annual Discussion Meeting: Sea-level change: The science of a changing world Venue: Durham

Organisers: Ian Shennan, Antony Long, Dave Roberts, Sarah Woodroffe

Contact: Ian Shennan, Durham University

Email: Ian.Shennan@durham.ac.uk

Details: Sea-level change: The science of a changing world (See QRA WWW)

28 April - 3 May 2010

Field Meeting: NW Highlands, Scotland

Venue: Inchnadampf

Organisers: Sven Lukas, Tom Bradwell (Queen Marys; BGS)

Contact: Sven Lukas

Email: s.lukas@qmul.ac.uk

Details: Palaeoglaciology and palaeoecology of the NW Highlands (See QRA WWW)

29 Sept - 2 Oct 2010

Field Meeting: Solway Firth

Venue: Solway Firth

Organisers: Dave Evans, Stephen Livingstone, Colm O’Cofaigh, Jerry Lloyd

Contact: Dave Evans, Durham University

Email: d.j.a.evans@durham.ac.uk

Details: Glacial and sea-level history of the Solway region (See QRA WWW)

Co-sponsored Meeting

23 - 24 April 2010

Conference: All at Sea? Synergies between past and present coastal processes and ecology

(University of Loughborough/ECSA/QRA)

Venue: Loughborough University

Contact: Jonathan Lewis

Email: allatsealboro@gmail.com

Details: <http://www.lboro.ac.uk/departments/gy/allatsea/home.html> and QRA WWW)

b) 2011

Jan 2011

Annual Discussion Meeting: Palaeohydrology

Venue: Liverpool

Organiser: Fabienne Marret

Contact: Fabienne Marret

F.Marret@liverpool.ac.uk

Details: To follow

18- 20 April 2011

Field Meeting: Quaternary of the Exe Catchment and the Blackdown Hills

Venue: Dorset/Devon

Organisers: Dr Laura Basell/Prof Tony Brown

Contact: Laura Bassell

Email: lbassell@hotmail.com; laura.basell@rlaha.ox.ac.uk

Details: Quaternary and Holocene landscape evolution of the Exe catchment and Blackdown Hills

September 2011

Field meeting/workshop: Glaciotectonics/Norfolk

Venue: Norfolk

Organisers: Emrys Phillips/Jon Lee

Contact: Emrys Phillips

Email: erp@bgs.ac.uk; jrlee@bgs.ac.uk

Details: 4 day workshop (2 days of lectures/workshops, 2 day in the field in North Norfolk).

Workshop centred on recent advances in glaciotectonics using Norfolk sites as examples.

10. Research Group proposals

Two proposals have been received for new QRA research groups:

a) Tephra in Quaternary Science (TIQS)

Organisers: Siwan Davies (Swansea), Simon Blockley (RHUL)

Tephrochronology is currently recognised as a key correlation tool that has considerable potential for addressing a number of chronological issues in Quaternary research. In particular, recent developments in the application of this technique have heralded a new wave of research initiatives that utilise tephrochronology to tackle significant scientific issues which, hitherto, have been unachievable with the traditional dating techniques. Tephrochronology is one of the few dating techniques that can traverse a wide range of palaeoarchives from the deep sea to polar ice sheets and as such has multi-disciplinary applications. Yet, despite this promise, a number of critical methodological issues remain that hamper the optimal application of this technique. We propose to establish a focus group entitled Tephra in Quaternary Science (TIQS) that will bring together individuals and groups with wide-ranging expertise in order to promote cross-group collaborations for optimising and advancing this technique. The aims and objectives of TIQS are as follows:

1. To optimise the application of tephrochronology as a robust correlation tool for Quaternary science;
2. To advance the extraction, quantification and geochemical techniques used in tephra studies;
3. To pool developing knowledge and generate protocols for new characterisation techniques e.g. LA-ICP-MS and Ion probe techniques;
4. To establish protocols to ensure the robust correlation of tephra deposits;
5. To explore opportunities for the further development of regional databases e.g. TEPHRABASE, RESET/RHOXTOR;
6. To advance the use of age-modelling techniques such as Bayesian statistics in tephra studies;
7. To provide a forum for (i) discussion and exploration of new ideas, (ii) mentoring and training of postgraduate and early-career researchers; and (iii) to create a platform for establishing future research initiatives.
8. To build a national research group that contributes directly to the aims of the INQUA INTIMATE and International Focus Group on Tephrochronology (INTAV).

At least 14 UK institutions are currently involved with tephra research and the last few years in particular, have seen a considerable increase in the number of postgraduates and early-career researchers currently immersed in the intricacies of tephra research. In particular, a number of research clusters have been established (e.g. Royal Holloway & Oxford (RHOXTOR); Swansea & Aberystwyth, QUB and Edinburgh). TIQS aims to promote cross-group collaboration that will encourage strategic thinking towards establishing future research agendas and to develop innovative applications of the technique. A focus group of this kind will raise the profile of the UK within the field of Quaternary tephrochronology.

We plan to hold 1 day annual workshops that will provide a dissemination and integration platform for UK tephra researchers, particularly for those at the outset of their research career. A specific theme will be identified for each workshop e.g. (i) analytical procedures for geochemical characterisation, (ii) statistical analysis of geochemical data and (iii) age modelling using tephra isochrons. Not only will these meetings provide an opportunity for general and break-out discussion of the key tephrochronological issues, but these occasions will also offer an occasion for hands-on training in specific techniques such as Bayesian age-modelling and statistical treatment of geochemical data. We envisage that the outcome of discussion at the TIQS meetings will contribute directly to the goals of the INQUA INTIMATE and INTAV groups and *vice versa*. In particular, establishing a national tephra group of this kind corresponds to the vision of the INTAV group as set out in the INTREPID project (Enhancing tephrochronology as a research tool). National groups are recognised as extremely valuable forums that feed directly into the goals of the international community and if supported, TIQS will be a key player at the next INTAV meeting in Japan in 2010.

b) Glacial Landsystems Working Group

Organiser: Dr David J.A. Evans (on behalf of the GLWG steering committee)

I would hereby like to propose the Glacial Landsystems Working Group (GLWG) as an affiliated research group of the QRA. GLWG has been in operation since 1998 when it organized its first field meeting to SW Scotland. Since that time it has organized a further nine field meetings, an international conference on “Ice-marginal glacial landsystems” in Keele in 2000 and a special session on “Quaternary palaeoglaciology” at INQUA 2007. It has also co-organized a “Palaeo-ice stream” international symposium in Aarhus, Denmark in 2001. Special issues of *Sedimentary Geology*, *Quaternary Science Reviews* and *Boreas* have been dedicated to the output from these respective events, and the textbook “Glacial Landsystems” was also a significant output from the members of GLWG.

GLWG field meetings are traditionally organized by postgraduate researchers and their supervisors based on their field area and timed to coincide with the culmination of their fieldwork. It is held in an informal atmosphere which aims to communicate ongoing research on palaeoglaciological reconstructions, focusing specifically on landform/sediment associations and their application to glaciated landscapes. As a consequence, meetings have typically attracted large numbers of postgraduate students, but a core of established academics continue to strongly support the group and provide valuable input to field based presentations and discussions. GLWG therefore performs a unique and most valuable role in the training of young palaeoglaciologists and would add a significant new dimension to the activities of the QRA but at the same time interface and have synergy with existing QRA support for postgraduates.

Glacial landsystems were first developed by Eyles (1983) and expanded more recently by Benn & Evans (1998) and then Evans and co-authors (2003) to include the wide range of process-form relationships associated with changing physiographic/tectonic settings and glacier ice characteristics. The landsystems approach provides us with a number of general guidelines for studying glaciated basins:

- The environmental significance of a sediment can be understood only with reference to its depositional position and the surrounding sediments and rocks
- Sediments are rarely deposited in isolation, but are laid down as part of an assemblage that reflects the process/es active in that environment
- Such assemblages can be recognised at a wide range of scales, from the very small to that of a whole continent or ocean basin

The environmental context of sediments can therefore be defined at different levels of a spatial hierarchy, beginning with the immediate locality and then in association with surrounding deposits expanding outwards to ever increasing horizons. At each successive level, the controls on the sedimentary system become larger in scale and longer-lasting in effect. This hierarchical approach to sedimentology, therefore, is a powerful means of describing how sediments, landforms and landscapes fit together, and determining how organisation in the landscape reflects the organisation of depositional processes and external controls in the environment. It forms the basis of facies modelling, or constructing descriptive and predictive models of relationships between different deposits. In areas where glacial deposits are lacking the landsystems approach integrates this information indicating that ice was erosive and exhausted the debris, or protective and never removed or modified the existing sediment.

GLWG will continue to organize one field meeting per year through the informal steering committee based at the University of Durham, which includes David J.A. Evans, Chris R. Stokes, Colm Ó Cofaigh and David H. Roberts. A field guide has always been produced for GLWG meetings but never formally published. It is therefore our intention to produce a QRA style field pamphlet/brochure for each GLWG meeting if affiliated. A web site for GLWG is presently hosted at Durham Geography http://www.dur.ac.uk/geography/qec/research_groups/glwg/ and will continue to be managed at that location.

Both proposals were accepted by the membership

11. Election of new Executive members

The following people have been nominated to succeed retiring members of the Executive Committee. Nominations were published in the June 2009 Circular. No other nominations were received by the closing date and so the following were duly elected:

Vice-President: Dr David Evans (Durham)
Secretary: Dr Peter Langdon (Southampton)
Publications Secretary: Dr Ian Candy (Royal Holloway)
Awards Officer: Dr Siwan Davies (Swansea)
Conservation Officer: Prof Cynthia Burek (Chester)
Ordinary Member: Dr Eleanor Brown (Natural England)

12 Any other business

INQUA 2011. The President expressed his concern about the lack of information coming out about the next INQUA Congress. The matter is being followed up. Such details that are available have been published in Quaternary Perspectives.

The meeting finished at 18.15.

Minutes taken by Dr Peter Allen (Treasurer)

6th January 2010

4. QRA FIELD MEETING: QUATERNARY OF THE FAR NW SCOTTISH HIGHLANDS: APRIL 2010

QRA Field Meeting 2010 The Quaternary of the Far NW Scottish Highlands 28th April – 3rd May 2010

Organisers : Sven Lukas (Queen Mary, London), Tom Bradwell (BGS, Edinburgh)

Background

The western part of this remote area of Britain was last visited by the QRA in 1995; the area inland of Assynt (i.e. the interior of Sutherland) has received little research attention until recently. Since the last meeting, a large amount of recent research has led to considerable advances in our understanding of the chronology and dynamics of Late Quaternary ice masses and palaeoecology (see below) that have implications for other areas of the British mainland and offshore. It is thus timely to revisit this spectacular area.

Preliminary programme

The meeting will focus on the late Quaternary of the far NW Highlands and adjacent (offshore) areas. Three and a half field days are planned, and the provisional programme will contain:

Day 1: The influence of bedrock lithology and structure on Quaternary landform formation; subglacial sediments related to ice-streaming (Allt an Strathan); P-forms, outwash terraces and sea-level evidence (Keanchulish, Strathkanaird); megagrooves (Rhidorroch, Elphin); ice-sheet thickness (Quinag).

Day 2: Cosmogenic isotope dating of Late Devensian deglaciation (Loanan Valley); speleothems, ¹⁴C and U-Th dates from the Assynt Bone Caves (Allt nan Uamh); karst and post-glacial weathering (Inchadamp); Holocene peat profiles and environmental change (Inchnadamp).

Day 3: Rogen moraines and pre-Younger Dryas readvance limits (Loch Shin); Geomorphological evidence of extensive Younger Dryas glaciation, glacier reconstruction and palaeoclimatic significance (Loch Shin, Loch a'Ghriama, Loch More); Younger Dryas "hummocky" moraine sedimentology and glaciodynamic significance (Bealach nam Meirleach).

Day 4: Large-scale rock-slope failure (Bealach nam Meirleach, Ben Hee); ¹⁴C-chronology (Loch Stack).

Accommodation

The meeting will be based at the Inchnadamp Hotel and Inchnadamp Lodge, Inchnadamp. The venues are both well equipped to cater for the group in all aspects (food, well-stocked bar); a large meeting room for evening presentations and a range of accommodation are also available.

Indicative costs per night per person are c. £17 for bunkhouse accommodation, £25-35 per single or shared twin/triple room, bed and breakfast included and c. £45-50 for a single room including dinner, bed and breakfast. Both en-suites and shared facilities are available.

Registration costs will be around £80 (standard) and £40 (students/unwaged members).

Access

It should be noted that, due to the widespread absence of roads and usable tracks, all days of this field meeting will involve long walks across mountainous, partly difficult and possibly water-logged

ground. Inchnadamph does not have any alternative facilities, and although we will pass local shops on some days, we would encourage participants planning not to have dinner at the hotel to bring provisions for the whole meeting based on previous experience.

Travel

Transport during the meeting will be in University minibuses, BGS and private vehicles, and we will aim at keeping the number of vehicles to a necessary minimum due to available parking space. The majority of roads in this area of the Highlands are single-track, so that larger buses for group transport are not a feasible option due to road widths.

The closest railway station to the area is Lairg, about an hour's drive south of the proposed meeting place, and pick-up from the station can be arranged if required. For everyone's convenience, we would offer to organise lifts for participants who do not travel to the venue as part of a group.

Further information: Further details are listed on the QRA web site, or available from Sven Lukas (QMUL), Tom Bradwell (BGS) (S.Lukas@qmul.ac.uk) 020 7882 8417

A registration form is included with this Circular.

QRA Publications

The QRA currently has field guides to over thirty destinations available for purchase. Recent additions to the series include:

***The Quaternary of the Solent Basin* (Briant et al) 2009**

***The Quaternary of the Trent Valley* (White et al) 2007**

The Quaternary of Northern East Anglia (Candy et al.) 2008

The Quaternary of Glen Roy and vicinity (Palmer et al.) 2008

The Quaternary of the North of Ireland (Whitehouse et al.) 2008.

The Quaternary of the Brecon Beacons (Carr et al.) 2007

The Technical Guide series includes:

No. 10 *The Identification and Use of Palaearctic Chironomidae larvae in Palaeoecology*. (Brooks et al) 2007.

No. 7 *The Description and Interpretation of Quaternary Stratigraphic Field Sections* (Jones et al.) 1999 (Digitally reprinted version).

More details on QRA publications and an order form can be found on the website (www.qra.org.uk).

If you are interested in producing a technical guide please contact the Publications Secretary. If you have a suggestion for a field meeting and accompanying guide book please contact the Meetings Officer.

QRA Field Meeting 2010
The Quaternary of the Far NW Scottish Highlands
28th April – 3rd May 2010

Registration form

Personal Details

Name:
 Address:

 Telephone:
 E-mail:

I wish to register for the meeting: £90 (£45 for students/unwaged; or £40 per day). Please tick the appropriate spaces and fill in amounts.

£....90.....
 £....45.....
 £....40..... (please indicate which day(s) you would like to attend)

Accommodation: (cannot be guaranteed after 01/03/2010)

Option 1: Inchnadamph Hotel

Accommodation options include either single or shared double/twin rooms. Breakfast is included, but should you wish a three course dinner to be added, please add a further £ 16 per night to your payment. If you wish to share with someone specific, please note this below. If no preference is given, room partners will be allocated by the organisers.

I wish to be a resident at the Inchnadamph Hotel (includes bed, breakfast and evening meal) for the following nights:

Single room (en suite)

28 April 2010 (£39)£.....
 29 April 2010 (£39)£.....
 30 April 2010 (£39)£.....
 1 May 2010 (£39)£.....

Single room (not en suite)

28 April 2010 (£35)£.....
 29 April 2010 (£35)£.....
 30 April 2010 (£35)£.....
 1 May 2010 (£35)£.....

Shared Double/Twin room (not en suite)

28 April 2010 (£30)£.....
 29 April 2010 (£30)£.....
 30 April 2010 (£30)£.....
 1 May 2010 (£30)£.....

Dinner, bed and breakfast option (additional)

28 April 2010 (£16)£.....
 29 April 2010 (£16)£.....
 30 April 2010 (£16)£.....
 1 May 2010 (£16)£.....

I have arranged to share a room with (name):

Option 2: Inchnadamph Lodge

Self-catering accommodation next-door to the Hotel. Breakfast can be You need to bring your own towel; bedding is provided. For an additional £ 2, breakfast can be added on an ad hoc basis (payable directly at the Lodge during the meeting). If you wish to share with someone specific, please note this below. If no preference is given, room partners will be allocated by the organisers. Single occupancy of rooms in the Lodge is unfortunately not possible due to space constraints.

I wish to be a resident at Inchnadamph Lodge for the following nights:

Shared Triple room

28 April 2010 (£21)£.....
29 April 2010 (£21)£.....
30 April 2010 (£21)£.....
1 May 2010 (£21)£.....

Shared Double/Twin room

28 April 2010 (£24.50)£.....
29 April 2010 (£24.50)£.....
30 April 2010 (£24.50)£.....
1 May 2010 (£24.50)£.....

Self-catering cottage (sleeps 6)

28 April 2010 (£13.50)£.....
29 April 2010 (£13.50)£.....
30 April 2010 (£13.50)£.....
1 May 2010 (£13.50)£.....

Special dietary requirements: Vegetarian..... Vegan.....Other:.....

I have arranged to share a room with (name):

I enclose a cheque payable to **'Queen Mary, University of London'** to value £.....*

I will pay at registration £.....*

*Please delete non-applicable option.

Signature:.....

Please return this form and payment to:

Dr Sven Lukas

Department of Geography

Queen Mary, University of London

Mile End Road

London E1 4NS

England

(Tel: 020 7882 8417; Fax: 020 7882 7479; E-mail: S.Lukas@qmul.ac.uk)

(In the event of cancellation the QRA will refund booking monies less irrecoverable costs already incurred.)

This form can also be downloaded from the QRA website at: <http://www.qra.org.uk/meetings/8>

5. QRA FIELD MEETING: THE SOLWAY FIRTH September 2010

Advance notice.

Further details on this field meeting will be available in due course. Please see the QRA website for updates.

Further information:

D. Evans, C. O’Cofaigh, A. Long, S. Livingstone (d.j.a.evans@durham.ac.uk)

6. QRA POSTGRADUATE SYMPOSIUM: 25th - 27th August 2010

The 15th Annual QRA Postgraduate Symposium runs this year from 25th - 27th August. The first day will include a diverse and interesting fieldtrip to Exmoor National park, incorporating a wide range of sites of interest to Quaternary scientists. The next two days of the conference will provide postgraduates, conducting research in the field of Quaternary science, to present in a relaxed and informal environment to their peers.

The aim of the conference is for young scientists with an interest in past climatic and environmental change to meet, discuss their work and foster links with one another, both academically and socially. Both oral and poster presentation slots are available and the deadline for registration and abstract submission is the 9th July 2010. The conference is open to postgraduates at any stage of their studies, whether they are MSc or PhD students. It is not a requirement that delegates present, but it is a great chance to practice for future conferences. The three-day event is always great fun, and there is no better way to meet your contemporaries from other university departments – the evening events tend to be just as interesting as the day’s talks!

This year’s keynote speaker will be Professor Chris Turney, recent recipient of the first INQUA Nick Shackleton Medal for Outstanding Young Quaternary Scientists. Chris will be talking to us about some of his recent research, as well as more generally about his experiences as an academic, and offering advice about pursuing a career in Quaternary research. For those of you know Chris, I do not need to emphasise that this should be a very entertaining talk! Please see the conference website for further details of Chris’ career and publications.

For more information on any aspect of the conference, or to register, please take a look at our website (www.QRA2010.co.uk) or email us at exeter@QRA2010.co.uk. The Conference Team looks forward to seeing you in August!

Tom Roland
Chairman of the Conference Team
QRA Postgraduate Symposium 2010
School of Geography, University of Exeter
t.p.roland@exeter.ac.uk

7. QRA ANNUAL DISCUSSION MEETING: JANUARY 2011

Preliminary Announcement

QRA Annual Discussion Meeting 2011 (4-6th January 2011) Department of Geography, University of Liverpool

Palaeohydrology: learning lessons from the past

Water-driven processes occur from deep oceans to shallow seas as well as on land in rivers, lakes and wetlands over variable time scales from long-term to abrupt, from slow to fast, from low magnitude to catastrophic. The impact of these events is often preserved in the landscape or in sediments, and they are sources of information on the water cycle on Earth. Palaeohydrology has driven numerous significant international programmes (e.g. PAGES: LUCIFS and LIMPACS) addressing themes across Quaternary timescales ranging from global scales to more locally focused changes in water regimes. These have addressed themes including the impacts of the rise and decline of large ice sheets, changing vegetation patterns, the responses of river catchments and lakes, and human mediation of hydrological systems. Hydrological issues often have analogues in the past, and the Quaternary geological record is a multi-faceted archive from which past perspectives on hydrological problems can be found, for example future water resourcing and landscape resilience. The QRA Annual Discussion Meeting will address different aspects of water-driven processes and interaction with the environment during the Quaternary.

On the evening of 4th January 2011 the Conference will host an Open Debate, the focus of which is allied to the conference theme and titled 'Flood Risks: your questions answered?'. The Open evening attended by conference participants, members of the general public (secured through local advertising) and regional press. A panel drawn from National and Local Government, Regulatory (River and Coastal) Organisations, Industry, Commerce, Insurance Services and Public Relations (Press and Television) will be invited to identify the key challenges and questions focused on 'Flood Risks'. These questions will be addressed to the audience of scientists attending the conference in the form of a chaired question and answer forum. Professor Peter Batey (the Lever Professor of Town and Regional Planning) whose research interests span urban policy evaluation; methods for impact assessment (including extended input-output analysis); spatial targeting and geodemographics; river basin and estuary planning and environmental management, has agreed to chair the discussion. The objective is to generate frank and open discussion between the scientific community, public and private organisations/figures and the public audience. The Open Debate is directly related to the focus of the Conference, with understanding of flood risk underpinned by the available data on flood magnitude and impacts. Within this a geological perspective is essential because measurement and document archives are only available for the last 200-500 years, whereas to understand the relationship between flood frequency and magnitude a longer perspective is needed. The scientists that provide this longer perspective, the geological baselines against which future perturbations (climate and land use change) can be evaluated, will be there to answer questions.

The focus of the meeting is global and aims to span the humid tropics, arid and semi-arid regions, the temperate zone, and polar and subpolar regions. The following themes have been selected to address specific aspects of water processes and the value of a palaeohydrology perspective.

Themes

1. Quaternary changes in hydrological systems – Jamie Woodward (confirmed)
2. Palaeohydrology of the last glacial interglacial cycle- Guillaume St Onge (confirmed)
3. Holocene palaeohydrology – Dan Charman (confirmed)
4. Human induced changes in palaeohydrology – Richard Dikau (to be confirmed)
5. Future changes in water regimes – John Dearing (confirmed)

Timetable:

3rd January 2010: Registration (3pm-5pm) – GIC room, Roxby Building.
Icebreaker: – Roxby Building, 9th floor, 5 pm onward.

4th January Leggate Theatre (VG)
am 9-9.30: Coffee/registration
9.30 –12.30 talks
Lunch break/poster: 12.30-13.30
pm 13.30-17: talks

19h: Open Public and Academic Debate: *Flood Risks: your questions answered?*

5th January Leggate Theatre (VG)
am 9-9.30: Coffee/poster
9.30 –12.30 talks
Lunch break/poster: 12.30-13.30
pm 13.30-17: talks

18.00- 19.00 Awards - AGM
Conference dinner

6th January Leggate Theatre (VG)
am 9-9.30: Coffee/poster
9.30 –12.30: talks
Lunch break: 12.30-13.30
Closing

Estimated costs:
~£85 per member
~42.50 per student

Organising committee:
Richard Chiverrell; Neil Macdonald; Fabienne Marret; Andy Plater
Contact: f.marret@liv.ac.uk

8. QRA RESEARCH AND CONFERENCE GRANTS

Please note: Full details of all QRA grants and application forms are available on the website (www.qra.org.uk). Applicants for awards should read the details carefully before submitting an application.

If you require a hard copy, please contact Dr Siwan Davies at:
Geography, School of the Environment and Society, Swansea University, Singleton Park, Swansea,
SA2 8PP
email: siwan.davies@swansea.ac.uk
tel: 01792295233

Quaternary Research Fund

- Purpose:** To foster research in any area of Quaternary studies
Eligibility: Members of the QRA of at least one years standing (NB postgraduates should apply to the New Research Workers' Awards)
Deadlines: 15th January, 15th May and 15th September
Awards: £50-600

New Research Workers' Awards

- Purpose:** To foster research in any area of Quaternary studies by postgraduate students
Eligibility: Postgraduate student members of the QRA of at least 6 months standing
Deadlines: 15th January, 15th May and 15th September
Awards: Up to £600

Quaternary Conference Fund

- Purpose:** To assist attendance at Quaternary science conferences and field meetings.
Eligibility: Members of the QRA of at least one years standing
Deadlines: 15th January, 15th May and 15th September
Awards: Normally up to £350

The Bill Bishop Award

- Purpose:** To provide support for field-based research in the subject of geology and related sciences in the fields of (i) Cenozoic stratigraphy, palaeoenvironments and chronology in relation to hominid evolution and (ii) British Quaternary stratigraphy, palaeoenvironments and geomorphology
Eligibility: Full and part time PhD and MPhil students
Deadline: 15th January annually
Award: £800 (maximum)

Lewis Penny Medal

- Purpose:** Awarded to a young or new research worker, and who has made a significant contribution to the Quaternary Stratigraphy of the British Isles and its maritime environment.
Deadline: Nominations should be submitted by 15th May annually.

QRA-RLAHA Luminescence Dating Award

- Purpose:** Set up in collaboration with the Research Laboratory for Archaeology and the History of Art at Oxford University, up to six optically-stimulated luminescence dates (from Pleistocene or Holocene sediments) will be awarded.
Eligibility: PhD students
Deadline: January 15th annually.

Postgraduate QRA Meetings Awards

- Purpose:** To enable a greater number of postgraduates to attend QRA meetings.
Eligibility: Any registered postgraduate who has been a QRA member for more than **6 months**
Deadlines: For Easter Annual Field Meeting or May Short Field Meeting: **January 15th**
For September Short Field Meeting: **May 15th**
For January Annual Discussion Meeting: **September 15th**
Awards: 50% of the costs of the meeting (excluding travel to the venue); six awards for the Annual Field Meeting, six awards for the Annual Discussion Meeting and three awards for the Short Field Meeting

Radiocarbon Dating Short Course Bursaries

- Purpose:** To enable members to participate in the annual two-day radiocarbon dating short course run jointly by NERC, AHRC and the University of Oxford.
- Eligibility:** The scheme is open to any QRA member (except undergraduates) regardless of length of membership, though preference will initially be given to first year PhD students who are not funded by either NERC or AHRC.
- Deadline:** 15th January 2011 and every 2 years thereafter
- Awards:** Up to four bursaries will be awarded every 2 years and will cover course fees only. Any other attendant expenses must be met by the applicant. Further details about the short course can be found at www.conted.ox.ac.uk/courses.

See the QRA website for forms and additional information on applying for these research grant schemes.

9. NEW QRA AWARD: JAMES CROLL MEDAL

This is the highest award of the QRA and is named in honour of James Croll (1821-1890). Croll is most closely associated with fundamental work on the astronomical theory of the ice ages, but he also made seminal contributions on the glacial geology of Scotland, on the mechanisms that drive ocean circulation and the impact of that circulation on recent climate, on tidal theory and the rotation of the Earth. These are all major issues that occupy Quaternary scientists to this day. Croll was effectively self-taught. His work and example demonstrate that any individuals from all backgrounds can rise to national eminence and generate science of lasting and major international impact, that it is not who you are or where you come from but what you do that is important. These are the qualities that the QRA seeks to celebrate in the award of the James Croll Medal.

The Medal is therefore normally awarded to a member of the QRA who has not only made an outstanding contribution to the field of Quaternary science, but whose work has also had a significant international impact.

Nominations and application procedure

The candidate should be nominated and seconded by any QRA members 'of standing' who are familiar with the candidate's work. Completed nomination forms should be forwarded to the Awards Officer by the **15th September 2010** deadline.

Presentation of the award

The award will be presented at the January AGM. The successful candidate will be invited to receive their award in person from the President. Travel costs and one night's accommodation will be made available from QRA awards funds (if required).

10. INQUA CONGRESS

XVIII INQUA Congress, 21st-27th July 2011

Details at: <http://www.inqua2011.ch/>

Grants for attendance at INQUA 2011 will be available from several sources, including:

1. Directly from the QRA. Eligibility: QRA members of at least 1 year's standing. For this scheme only, members who are currently in receipt of other QRA Awards (or for whom 12 months have not yet elapsed since submitting their reports) are also eligible to apply. Applications from former grant holders who still owe outstanding reports will not be considered.

Applications for support (up to £1000) should be made on the INQUA Conference Grants form; preference will be given to those presenting papers. Deadline for receipt of applications is **15th February 2011**. Applications for INQUA travel funding via the normal Conference Grants scheme will not be considered. Eligible applicants will also be expected to apply for support from other sources, including the Royal Society.

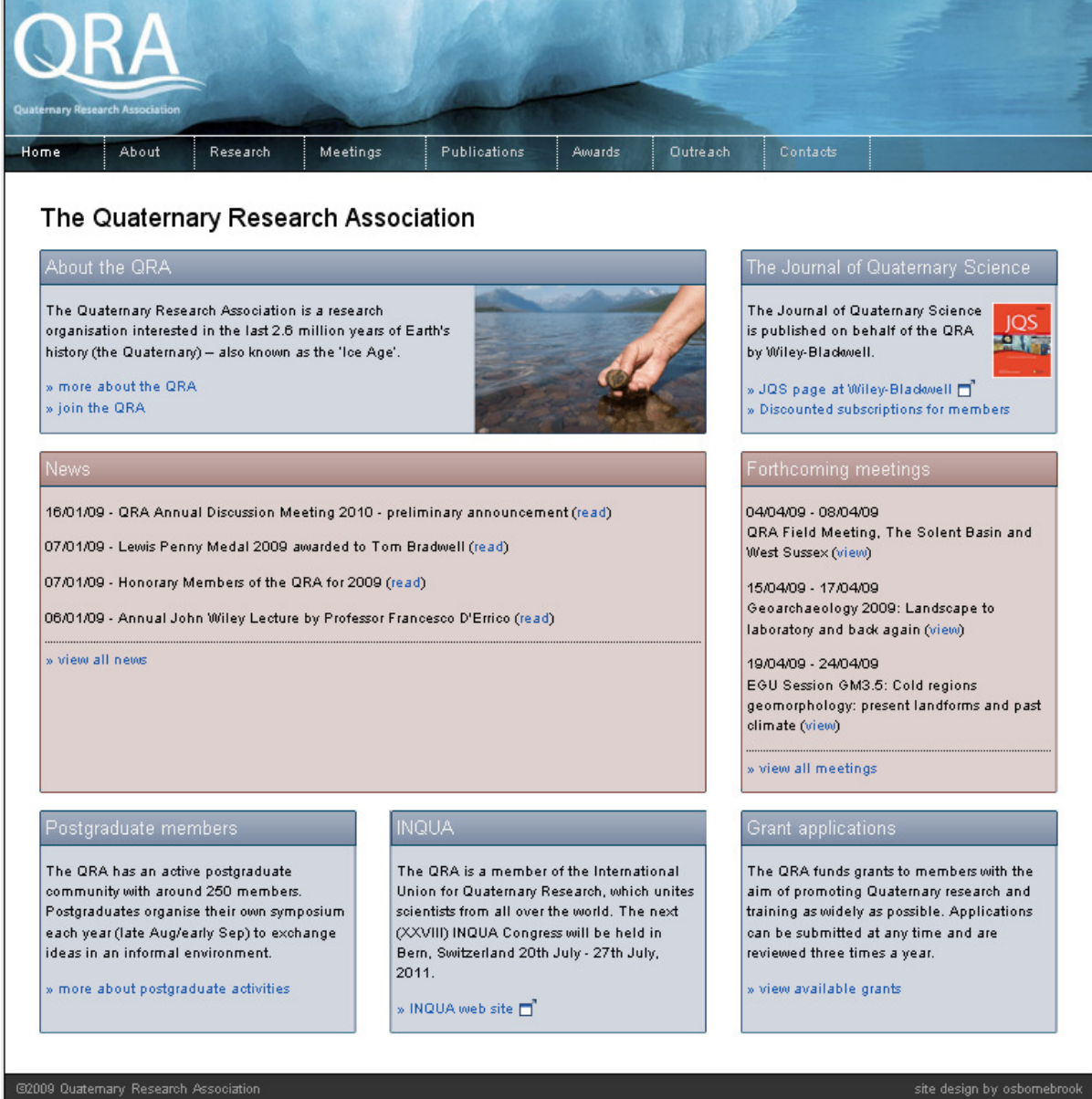
2. The Royal Society, via their conference grants scheme. Closing dates are normally 1st September, 1st December and 1st March. Details at: www.royalsoc.ac.uk/funding/

See this Circular and the QRA website for forms and other guidelines on applying for conference awards.

11. QRA WEBSITE DEVELOPMENT

The new QRA website was launched at the AGM in January 2009. The new site has been developed for the QRA by OsborneBrook, a professional web design company. The first phase of the development is now complete and planning is commencing for phase two. The site now provides the QRA with a completely new and up-to-date web presence. It will also provide a platform for further development over the next few years.

<http://www.qra.org.uk>



QRA
Quaternary Research Association

Home | About | Research | Meetings | Publications | Awards | Outreach | Contacts

The Quaternary Research Association

About the QRA

The Quaternary Research Association is a research organisation interested in the last 2.6 million years of Earth's history (the Quaternary) – also known as the 'Ice Age'.

» [more about the QRA](#)
» [join the QRA](#)

The Journal of Quaternary Science

The Journal of Quaternary Science is published on behalf of the QRA by Wiley-Blackwell.

» [JQS page at Wiley-Blackwell](#)
» [Discounted subscriptions for members](#)

News

16/01/09 - QRA Annual Discussion Meeting 2010 - preliminary announcement ([read](#))
07/01/09 - Lewis Penny Medal 2009 awarded to Tom Bradwell ([read](#))
07/01/09 - Honorary Members of the QRA for 2009 ([read](#))
06/01/09 - Annual John Wiley Lecture by Professor Francesco D'Errico ([read](#))

» [view all news](#)

Forthcoming meetings

04/04/09 - 08/04/09
QRA Field Meeting, The Solent Basin and West Sussex ([view](#))

15/04/09 - 17/04/09
Geoarchaeology 2009: Landscape to laboratory and back again ([view](#))

19/04/09 - 24/04/09
EGU Session GM3.5: Cold regions geomorphology: present landforms and past climate ([view](#))

» [view all meetings](#)

Postgraduate members

The QRA has an active postgraduate community with around 250 members. Postgraduates organise their own symposium each year (late Aug/early Sep) to exchange ideas in an informal environment.

» [more about postgraduate activities](#)

INQUA

The QRA is a member of the International Union for Quaternary Research, which unites scientists from all over the world. The next (XXVIII) INQUA Congress will be held in Bern, Switzerland 20th July - 27th July, 2011.

» [INQUA web site](#)

Grant applications

The QRA funds grants to members with the aim of promoting Quaternary research and training as widely as possible. Applications can be submitted at any time and are reviewed three times a year.

» [view available grants](#)

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12. JOURNAL OF QUATERNARY SCIENCE

The *Journal of Quaternary Science* is the Association's journal, founded in 1986 and published on behalf of the QRA by Wiley-Blackwell. JQS currently publishes eight issues per year, including two special issues. In 2008 the Impact Factor for JQS increased to 2.5, placing it among the top multidisciplinary geoscience journals. The journal continues to develop in the Americas, Asia and Australasia, while continuing to represent the wide range of Quaternary science research in Europe. JQS publishes original papers on any field of Quaternary research, and aims to promote a wider appreciation and deeper understanding of the earth's history during the last two million years. Papers of wide international interest from a wide range of disciplines appear in JQS including, archaeology, botany, climatology, geochemistry, geochronology, geology, geomorphology, geophysics, glaciology, limnology, oceanography, palaeoceanography, palaeoclimatology, palaeoecology, palaeontology, soil science and zoology.

The QRA benefits directly from the success of JQS through the annual royalty it receives from Wiley-Blackwell. This income has allowed the Association to expand its range of grants schemes, in particular to support postgraduate researchers, to fund over thirty scientists to participate in the recent INQUA Congress in Cairns, Australia and undertake development of its web site to enhance the on-line presence of the QRA.

With the continued development of on-line publishing, the income to the journal is increasingly determined by the subscription packages purchased by institutional libraries in the UK and elsewhere. It is therefore important that:

- Academic and related organisations continue to include JQS in their library's subscription packages,
- On-line usage of JQS is increased by maximising the number of downloads of articles from the Wiley InterScience® web site,
- QRA members consider JQS as an outlet for their research and encourage colleagues and co-workers to submit papers to JQS.
- Organisers of meetings or conferences include publicity materials to promote JQS to meeting delegates. Please contact Genevieve Eastwood at Wiley-Blackwell (geastwoo@wiley.com) to discuss requirements.

The QRA Executive Committee also continues to encourage individuals to take advantage of the very significant reduction in subscriptions to receive the print edition of JQS which are offered to all QRA members by Wiley-Blackwell.

<http://www3.interscience.wiley.com/cgi-bin/jhome/2507>

13. QUATERNARY NEWSLETTER

Copy deadlines for *QN* are: 1st of January, May and September each year. Material should be submitted to the Editor:

Dr Mark Bateman
Department of Geography,
University of Sheffield
Sheffield, S10 2TN
M.D.Bateman@Sheffield.ac.uk

Quaternary Newsletter

QN is published three times a year and includes short research papers, meeting reports, abstracts, research reports, reviews, news and notices. Short research articles (up to 3000 words in length) would be particularly welcomed by the Editor; all submissions are reviewed prior to acceptance.

If you would like to discuss submission of a short research paper for publication in *QN* please contact the Editor, Dr Mark Bateman (M.D.Bateman@Sheffield.ac.uk).

14. CALENDAR OF QRA MEETINGS

Offers to arrange meetings are always welcome. Please contact the Meetings Officer: Dr David Roberts (d.h.roberts@durham.ac.uk) to discuss your proposal.

28 April - 3 May 2010

Field Meeting: NW Highlands, Scotland

Venue: Inchnadampf

Organisers: Sven Lukas, Tom Bradwell (Queen Marys; BGS)

Contact: Sven Lukas

Email: s.lukas@qmul.ac.uk

Details: Palaeoglaciology and palaeoecology of the NW Highlands (See QRA WWW)

29 Sept - 2 Oct 2010

Field Meeting: Solway Firth

Venue: Solway Firth

Organisers: Dave Evans, Stephen Livingstone, Colm O’Cofaigh, Jerry Lloyd

Contact: Dave Evans, Durham University

Email: d.j.a.evans@durham.ac.uk

Details: Glacial and sea-level history of the Solway region (See QRA WWW)

Co-sponsored Meeting

23 - 24 April 2010

Conference: All at Sea? Synergies between past and present coastal processes and ecology
(University of Loughborough/ECSA/QRA)

Venue: Loughborough University

Contact: Jonathan Lewis
Email: allatsealboro@gmail.com
Details: <http://www.lboro.ac.uk/departments/gy/allatsea/home.html> and QRA WWW)

Jan 2011

Annual Discussion Meeting: Palaeohydrology

Venue: Liverpool

Organiser: Fabienne Marret
Contact: Fabienne Marret
Department of Geography
Roxby Building, room 510
University of Liverpool
Liverpool
L69 7ZT

Tel: + 44 0151 794 2848
Fax: + 44 0151 794 2866
<http://www.liv.ac.uk/geography/>

Email: F.Marret@liverpool.ac.uk
Details: See section 7 of the circular and QRA WWW

18- 20 April 2011

Field Meeting: Quaternary of the Exe Catchment and the Blackdown Hills

Venue: Dorset/Devon

Organisers: Dr Laura Basell/Prof Tony Brown
Contact: Laura Bassell
Postdoctoral Researcher
School of Geography
University of Southampton
Southampton
SO17 1BJ
Telephone: 07792 583742

Email: lbassell@hotmail.com; laura.basell@rlaha.ox.ac.uk

Details: Quaternary and Holocene landscape evolution of the Exe catchment and Blackdown Hills

September 2011

Field meeting/workshop: Glaciotectonics/Norfolk

Venue: Norfolk

Organisers: Emrys Phillips/Jon Lee
Contact: Emrys Phillips
BGS
Email: erp@bgs.ac.uk; jrlee@bgs.ac.uk

Details: 4 day workshop (2 days of lectures/workshops, 2 day in the field in North Norfolk).
Workshop centred on recent advances in glaciotectonics using Norfolk sites as examples.

Details of all QRA meetings are also available on the website: www.qra.org.uk

The QRA Circular is compiled by

Pete Langdon

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NOTE: As discussed at the AGM this will be the last circular to be printed as a separate pamphlet and mailed with QN. In the future there will be an A4 sheet with sent out with QN highlighting key activities within the QRA. All specific details will be able to be found on the QRA website.