The Geological Society

Annual Review 2010

Serving Science & Profession

The Society's aim

The Geological Society of London was instituted in 1807 for the purpose of "investigating the mineral structure of the Earth".

In 2007, Council adopted a 10-year strategy, the principal objectives of which are:

- To be the respected public voice of geosciences in the UK
- To provide lifelong professional support to geoscientists
- To recognise and foster innovation in the geosciences
- To show leadership in the geosciences community nationally and internationally
- To promote geoscience education
- To communicate geoscience research and practice
- To assure high professional standards for the benefit of society.

From January 2010 the Society's Council had, as specific aims for the year, to:

- Implement a lifelong learning plan
- Conduct a Library review
- Conduct a Geophysics review
- Devise and promulgate a Society Climate Change Statement

Full source material for this Annual Review can be found at www.geolsoc.org.uk/annualreview2010

Contents

Beyond reasonable doubt

From the President

Consider, please, two days in the life of our Society. It is a Tuesday in March. I am in Cardiff for a debate, about humans and their planet, between six schools – organised by the South Wales Regional Group. The standard exceeds our already high expectations, and the prizes donated by Halcrow gleam enticingly on the platform of the school hall (see pp 12,13).

Before they are awarded, I ask the participants to identify those matters in their presentations that they consider to be established "beyond reasonable doubt", and those about which they are most uncertain. As reported in *Geoscientist*, responses to this unexpected extra task are right on the money. The panel, which includes those for whom Chartered Status is the essence of the Society as well as others deep into academic research, unite gladly in handing over the gleaming trophies.

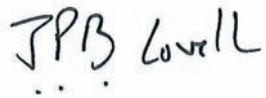
The idea that we can emulate our legal friends in this way, to move "beyond reasonable doubt" in public assertions about socially significant matters, was invoked again in 2010. President Lynne Frostick and Council had asked a group of notable scholars from the Fellowship to produce a statement on climate change. Council's suggestion that the scholars concentrate on geology was almost certainly unnecessary; but we were determined to enter the bear-pit of this highly political subject secure on our own particular ground of observational science. The result, communicated in a report presented by Group Chair Colin Summerhayes, will stand as a model of how these things should be done.

So come the second day – a Wednesday in November – we find ourselves at the final day of a joint meeting at Burlington House, organised with the British Ecological Society. The latest research on carbon isotope excursions, and on the ecological impact of the current excursion (the one we are responsible for), is presented and discussed by another scholarly group. Following this "fundamental science" session, we are joined by policy-makers and others in public life to discuss – before a panel composed of Professors David MacKay, John Raven and myself – the social and political implications of the scientists' conclusions.

These events, and scores like them, are not instigated or delivered in isolation. Each is designed to contribute towards realising our 10-year Strategy. These plans have been debated and approved by successive elected Councils. Delivery on them is monitored; success is the norm – not least because of the commitment of the staff. Thus, the Cardiff debate was expertly integrated into a range of educational activity for which the Society is responsible. Our statement on climate change was published and featured at that November joint meeting, and is preceded and followed by many other events that serve both science and profession.

It is now two decades since science and profession came together in the present-day Geological Society of London. Guests have commented how hard it can be to tell our former tribal affiliations as we engage in our debates. In public affairs, our collective wisdom is increasingly giving us a significant voice – without jeopardising our traditional eager promotion of our individual academic specialisms to each other.

In 2010 we made it clear to our fellow citizens that, though geologists may argue a lot, it is unwise to argue with a rock.



Bryan Lovell

Council membership

President:	Dr Bryan Lovell OBE
Vice Presidents:	Prof Susan Marriott; Dr Colin Summerhayes; Dr George Tuckwell
Secretaries:	Prof Philip Allen; Prof David Manning; Dr Jonathan Turner
Secretary, Foreign & External Affairs:	Prof Alan Lord
Treasurer:	Prof Andrew Fleet

Council members – trustees of the charity – during the year were:

Prof P A Allen[1,4,7]; ~Dr I D Bartholomew[1,2,4]; *Miss S Brough[3]; Mr M Brown[2]; *Prof R W H Butler[2]; Dr M Daly[2]; ~Prof E Derbyshire[1,2,4]; Prof A J Fleet[1,3,4,6]; ~Prof C M R Fowler[7]; ~Prof L E Frostick[1,2,4]; *Dr S Gibson[5]; Dr R Herrington[1,3,7]; Dr R Hughes[3]; Dr A Law[1,4]; Prof A R Lord[1,2, 7]; Dr J P B Lovell[1,4]; Prof J N Ludden[2]; Mr P C Maliphant[5]; Prof D A C Manning[1,4,5]; Prof S B Marriott[1,4,5]; ~Prof J D Marshall[6]; Prof S K Monro OBE[2]; *Dr C P Summerhayes[1,2,7]; *Professor J H Tellam7; Dr G W Tuckwell1,4,5; Dr J P Turner1, 4,6; Prof D J Vaughan3, 6; Mr N R G Walton6

* New members elected at the AGM on 2 June 2010
~ Council members who retired at the AGM 3 June 2009

Membership of Standing Committees

[1] Elections; [2] External Relations; [3] Information Management; [4] Management and Finance; [5] Professional; [6] Publications; [7] Science.

Method of Election of Trustees

Trustees are elected by the Fellowship in Annual General Meeting by ballot of Fellows present on a list of candidates. New trustees are annually invited to an *induction day* in order to obtain an understanding of the Society's affairs and what tasks they will undertake as a member of Council. They also receive written guidance on their responsibilities as trustees.

Audit Committee

The Audit Committee reports directly to Council. Members include: Mr C D Bulley, Mr D W Fenwick, Dr A Law, Prof J D Mather, Prof D G Murchison, Dr T J Palmer, Mr M H Pattinson, Dr R Stabbins *(Chair)*.

Experience of age, enthusiasm of youth

From the Executive Secretary

In the year that this Society achieved a standing membership of 10,000 Fellows for the first time, statistics reveal that its Fellowship has an average age of a rather sprightly 42 – quite low when compared to many learned and professional bodies. As well as allegedly being the answer to Life the Universe and Everything, 42 neatly bisects the difference between two groups we might, kindly or unkindly, describe as the "old" and the "young".

We need both, of course, to survive; and the services we as a Society provide must cater equally for those who are high on experience, as well as those whose enthusiasm remains undimmed by it. With luck, if we get this balance right, we can not only transfer the experience of age to the young, but even perhaps persuade the spark of youth to travel a little too!

The year 2010 witnessed a great expansion in our work for the very young. As you will read below, we set up a Schools Affiliate Scheme to provide support for schools in teaching Earth science. For school teachers, we ran the first ever Geoscience Education Academy in August, with the aim of supporting teachers who have to deliver course elements in Earth science but who themselves lack any background in our discipline.

This sort of practical, nuts-and-bolts help for practising teachers, combined with exciting and educational experiences for their pupils (and as exemplified by our online teaching materials) is just the sort of thing that practitioners ask for, but all too rarely receive. And, mindful of the rapid pace of scientific and technical advance, 2010 also saw an expansion in our Lifelong Learning Initiative, which helps to ensure there is a one-stop-shop for relevant "updating" courses in our universities and colleges.

The year also saw us embracing new media with renewed vigour, via Twitter and Facebook. A complete redesign of our Fellowship magazine was initiated, while our series of Society Podcasts, already proving highly popular, came to fruition and went from strength to strength. Being more "experienced", alas, offers no respite from this relentless need to update and modernise; and we were pleased to announce in 2010 that two new titles – the *Journal of Micropalaeontology*, and *Petroleum Geoscience* – were added to the Lyell Collection. This brought the total number of journal titles and key book series available to 12.

We are also broadening our reach in terms of policy influence. It is this Society's strategy to involve itself in "science for policy" (rather than attempting to devise our own "policy for science"), and so keep our work with Government and Parliament firmly rooted in our discipline. The 2010 Sir Peter Kent Lecture, our flagship science and policy forum, was delivered by former Chief Scientific Adviser Sir David King, who addressed a packed meeting on *Climate Change as a Global Shifting Force* – a subject to which, as geologists, we believe we can make a unique contribution. Our ambition (see Annual Review 2009) to bring forward a statement on climate change rooted in geological evidence, was finally realised in November 2010 with the publication of *Climate change: evidence from the geological record*.

While that statement, which was widely welcomed by scientific and policy-making communities alike, strove to confine itself within the bounds of geological evidence, there is no denying that the Earth recognises no disciplinary boundaries. For this reason, reaching out to other subjects and constituencies is crucial, and we were pleased to organise a conference jointly with the British Ecological Society, entitled *Past Carbon Isotopic Events and Future Ecologies*. This looked at past examples of rapid climate change – especially the Paleocene-Eocene Thermal Maximum – and included a panel discussion on the policy implications of the meeting's scientific sessions, to which policy makers were invited.

The year also saw us revitalise our programme of Honorary Fellowship, for which new criteria, commensurate with our 10 Year Strategy, were drawn up and agreed. One of those newly elected Honorary Fellows, the distinguished Chinese palaeontologist Xu Xing, (Institute of Vertebrate Palaeontology and Palaeoanthropology, Chinese Academy of Sciences) delivered a fascinating public lecture on the evolutionary turning-point that saw the birds originate from dinosaur stock. Neatly bringing together experience and youth, Professor Xu was joined by University College London postgraduate student Michael Pittman, whose participation in the Inner Mongolia Research Project had led to his discovery of a new species of carnivorous dinosaur, *Linheraptor exquisitus*, earlier that year.

The Society's Shell Lectures, in London and in regional university centres, continue to bring a wider public than ever before into contact with geology – proof of which can be seen in the fact that in 2010, membership of the Society's Friends scheme, which extends a form of affiliation to amateur geologists who lack the qualifications and experience necessary for Fellowship, grow to over 100 strong.

This bringing together of youth and age, professional, amateur, practitioner and academic, is what this Society has always been about, from its very first injunction (in our founding document) to make geologists "acquainted with each other" and to "stimulate their zeal". We hope that this Report amply demonstrates these noble objectives achieved. Bring on 2011!

Edmund Nickless

Public voice

The strategy of the Society is focused on being the respected public voice of geoscience within the UK.

Prof Alan Lord
Secretary, External Affairs

In 2010, the Society continued to develop its renewed focus on the vital role of Earth science in policy making. Our science has a fundamental role to play in addressing many of the greatest challenges facing humanity in the 21st Century, and in informing public debate about these issues. The External Relations Committee (ERC) has made great progress, working with a wide range of the Fellowship, towards putting the Society in its rightful place at the heart of debates about these challenges, and we are well positioned to capitalise on these early successes in the coming years. 2010 also saw the retirement of Edward Derbyshire as Secretary for Foreign and External Affairs – the Society is in his debt for his great contribution, both in this role, and in others over many years.

In November, the Society issued its first public statement on climate change (www.geolsoc.org.uk/climatechange). It was drafted by a working group of experts in various aspects of what the geological record can tell us about past climate change, before being examined and endorsed for publication by Council. Its focus on the geological evidence, rather than on climate modelling, contrasts with the approach taken by many other organisations, and it was very well received by policy makers, the Fellowship, the media and the wider public – as well as stimulating debate, as we had hoped. The geological narrative on climate change, new to so many outside our community, also formed the subject of a two-day meeting, held jointly with the British Ecological Society, which concluded with a debate about policy implications – bringing together leading scientists and policy makers. The interest this has generated in government is heartening, and there is every indication that there is scope to build on this in 2011.

We have made our mark in other areas of 'science for policy' too. Council agreed a revised process for developing responses to consultations, and the more inclusive approach is paying dividends. Our submission to the House of Commons Science and Technology Select Committee's inquiry into strategically important metals, for instance, was prepared in conjunction with our Mineral Deposits Studies Group. As a result of the strong written evidence we submitted, David Manning (Secretary, Professional Matters) was called to give oral evidence to the inquiry – at the time of writing, we await the committee's report.

Other consultations and inquiries to which we submitted responses include those into radioactive waste management, scientific advice to government in emergencies (focusing on the Eyjafjällajökull eruption), the European Framework Programme, the forthcoming DEFRA environmental White Paper on the Nature of England, the Marine Policy Statement, and the appointment of panels for the REF (Research Excellence Framework). We also worked with other bodies to ensure that science was on the agenda during the general election campaign, and that the case for continued investment in research and teaching was strongly advanced as the cuts started to bite.

Our outreach activities have continued to thrive, with the growth of our popular *Friends of the Geological Society* scheme (see *Education*, p. 12), further development of our

lifelong learning plans, and our now thriving podcast series. The Society has also started to 'tweet' (that is, to communicate via Twitter), and has developed a presence on Facebook. We organised a session at the British Science Festival on contaminated land, with a focus on the host city of Birmingham, while Sarah Day flew the flag for Earth science at the Orkney Science Festival, and during the process managed to talk to a high proportion of the islands' primary school children about the wonders of geology! Xu Xing, one of our youngest Honorary Fellows, famed for his prolific dinosaur discoveries, gave a stimulating public lecture in July.

We were successful in attracting media coverage, beyond that for the climate change statement, for, among others, the President's *JGS* paper on 'hot blobs', and that by Fleur Loveridge *et al.* in *QJEGH* on the possible threat from climate change to UK rail networks.

We have continued to play a leading role in international bodies. In particular we have been working with European partners to strengthen the governance and activities of the IUGS (International Union of Geological Sciences). UK scientists have been active in leading IGCP (International Geoscience Programme) projects.

The Geological Society has also been among those exploring whether there is grassroots support for launching a Global Geoscience Initiative, and a series of town hall meetings has developed this idea – we hope there will be further progress to report in 2011.

Creating and growing a network of companies that employ, or rely on, geoscience professionals is a critical element in our outreach. Despite the recession, the number of Corporate Affiliates of the Society remained stable at 67. A reception for Affiliates was held in Burlington House on November 17, following a lecture by Nick Petford (Vice-Chancellor, University of Northampton) on the Icelandic eruption and ash cloud that had done so much to disrupt business earlier in the year. The scheme remains heavily dependent on the oil and gas sector, and the Society is trying to entice more companies from other industry sectors to join, including environmental and engineering-based companies, financial institutions, banks, insurance brokers and legal firms.

Serving science & profession

Although the Society began life as a scientific organisation in 1807 and organises over 100 scientific meetings every year, it also encompasses a wider, professional role.

Prof David Manning
Professional Secretary

Prof Philip Allen
Science Secretary

Serving the profession

David Manning, Professional Secretary

I retire as Professional Secretary at the AGM in June 2011, after a three-year term that has seen major changes to the way in which the Society serves the profession. During 2010, we have continued to develop a much more 'client friendly' approach to chartership, ably supported by the Chartership Officer, Bill Gaskarth, who took on that new role in 2009, and by staff in the Fellowship Services Office at Burlington House.

The changes have brought substantially increased numbers of candidates for chartered status, (CGeol and CSci) who are interviewed at locations around the UK on set dates. Gone are the days when a candidate could not tell his or her employer when a decision would be made. We have accredited geology undergraduate programmes at all major UK universities (more detail online), and have begun to accredit both MSc and overseas programmes. We have moved from the endorsement of company training schemes to their formal accreditation – which helps reduce the time before a candidate can start to prepare their case for chartership.

What marked 2010 was the impact of Hong Kong on our approach to serving the profession. In February 2010, the Executive and Professional Secretaries visited the former colony, where the Regional Group boasts some 250 members, 60 of them Chartered. Demand for geologists and their expertise there is far greater than anything presently encountered at home. Our discussions with Hong Kong University, the Geotechnical Engineering Office (HK Government) and multinational consultants has shown that we are doing something right and unique, and that our service to the profession will be needed for decades to come.

Why does our HK experience matter? Because it shows that the Society is unique in offering something that people want, and will pay for; something portable, like a university degree, internationally recognised, and which provides an independent assessment of professional

competence. Our (peculiarly 'British') approach to awarding chartership enables us to offer it to anyone in the world who is appropriately qualified. I don't think there is any other country with a system as robust, in terms of its operation, and yet so open to all who wish to use it to make a public statement of their personal professional competence.

Full source material for this Annual Review can be found at www.geolsoc.org.uk/annualreview2010

Serving science

Prof Philip Allen, Science Secretary

The Science Committee's primary responsibility is managing the Society's programme of scientific meetings. It takes a proactive role in generating ideas for meetings (including all flagship meetings, named for Holmes, Lyell, Smith, and Fermor), public lectures and outreach.

Science Committee counts among its members the chairs of Specialist Groups plus invited members who provide links to other committees and units in the Geological Society (External Relations, Professional, Publications and Publishing). In 2010, we promoted the Lyell and Smith flagship conferences *(Comparing the geological and fossil records: implications for biodiversity and Landscapes into Rock)* followed by *Past Carbon Isotopic Events & Future Ecologies* (jointly with the British Ecological Society), which concluded with an open forum. Science Committee also constructed the *Shell London Lecture Series* and the *Shell University Lecture Series*. The former now involves two performances. It is impressive to witness the lecture theatre filled to the brim twice on the same day with interested non-specialists.

Science Committee is actively considering ways in which the Society can promote geoscience to as wide a constituency of interest groups as possible. It also wishes to facilitate more integrated, systems-type approaches to problem-solving in Earth and allied sciences, and to promote newly emerging areas. We have therefore initiated a joint session with the Geological Society of America at the annual general assembly of the European Geosciences Union (EGU, Vienna 3-7 April 2011) as the beginning of a closer, long-term relationship.

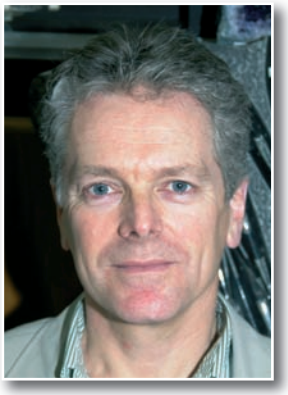
In addition, the Committee has started an annual *'Frontiers'* meeting, covering emerging areas and designed to be of special interest to younger geoscientists. In collaboration with Professional Committee, an Environment Network has been formed – a horizontal structure that weaves together several specialist groups with broadly environmental interests (particularly Engineering, Nearsurface Geophysics, Hydrogeology, and Geochemistry groups).

It seems likely that science will be increasingly outward-facing, dealing with complex multidisciplinary problems with greater collaboration and end-user awareness. Disciplines (and Specialist Groups) will thrive by engagement in wider problem-solving, and not "turf protection". Knowledge generation will still be critical – but knowledge *translation* even more so. While emphasis on societally relevant solutions will grow, their quality will depend on the excellence of their scientific foundation. It it builds strategic alliances, GSL has a major opportunity to speak with a strong, coherent and expert voice in this changing landscape. Science Committee plays a pivotal role in helping it do so.

Innovation in geoscience information

The Society is a geoscience publisher of global stature, and proud custodian of one of the great geological libraries of the world. Innovation in both is the key to their continued success.

Dr Jonathan Turner
Publications Secretary



Dr Richard Hughes
Chair, Information Management Committee

The Geological Society Publishing House is a major force in Earth sciences publishing, respected throughout the world for the breadth and quality of its published output. Efficient running of the Publishing House fulfils two major objectives for the Society: to disseminate high-quality geoscience to the Earth science community, and to generate financial surplus that is invested to assist the Society with its diverse range of activities.

To date, the Publishing House has delivered consistently healthy surplus and in 2010 financial performance was outstanding, generating some £524k. This is particularly impressive given the highly competitive commercial environment in which the PH operates, with a relatively small pot of major international publishers vying to increase their market share. Rarely has the cliché 'needing to run to stand still' been more apt. In 2010 the PH more than held its ground, achieving 23 new *Lyell Collection* subscriptions now at 102, and completing the transfer of all online journals and books to the H2O platform on which the *Lyell Collection* is hosted We also published 23 volumes in our flagship special publications series, plus 4 other books including the hugely impressive two-volume proceedings of the 7th Petroleum Geology Conference.

As founding members of *Geoscience World*, the online consortium of geoscience publishers, we continue to punch above our weight with the Society's titles consistently receiving greater than the GSW average number of 'hits'. Journal performance was excellent – the *Journal of the Geological Society* achieved its highest ever impact factor at a shade under 3.3, reflecting the esteem in which it is held internationally, and the impact factors of the journals *Petroleum Geoscience* and *Geochemistry: Exploration Environment, Analysis* also recorded encouraging increases.

The *Quarterly Journal of Engineering Geology & Hydrogeology* awarded its annual *Professor William R Dearman Young Author of the Year Award* to Dr Stuart Dunning, Northumbria University, for his paper on the application of terrestrial laser scanning to landslide investigation. The *Journal of the Geological Society's* Young Author of the Year is Dr John Armitage, Imperial College, whose paper, with Professor Philip Allen, on subsidence mechanisms in intracratonic basins breaks new ground in understanding the geodynamic origin of these often vast, enigmatic features.

Maintaining the vibrancy of the special publications series is entirely dependent on our ability to attract, and sell, a steady flow of high-quality books. In 2010 the SP commissioning process has been boosted with several new initiatives including free colour figures for authors and the encouraging progress we have made negotiating inclusion of the SPs in a conference series books citation index. Marketing activity is being stepped up with increased emphasis on electronic promotion, and we continue to work closely with our agents to develop opportunities overseas, particularly at present in Brasil, China and throughout Europe. A further challenge we face is the extraordinarily rapid pace of development of new publishing technologies and services, requiring constant monitoring by Publishing House staff.

As opportunities to develop brand new journals and book series dwindle, it is clear that an increasing trend in scientific publishing is going to be the expansion of services to readers and authors, many of which are blurring the distinction between publishers and libraries. Developments in this area include planning, now at an advanced stage, to roll out a publish-ahead-of-print service whereby papers are published online as soon as they are accepted rather than all papers having to wait for the slowest manuscript to proceed through the system. We have also negotiated very favourably the inclusion of *Lyell Collection* content in the new *Geofacets* web-based geographic search tool. It will facilitate even greater exposure of the *Lyell Collection* worldwide, with additional potential to increase our pay-per-view income significantly.

Library Assistant Michael McKimm with some rare volumes in need of conservation

None of this impressive list of achievements would be possible without the hard work not only of the Publishing House staff, but also that small army of – often anonymous – reviewers, multifarious editors, marketing specialists, and of course authors. To all of them I pay tribute here with the gratitude of the entire fellowship of the Society. The Publishing House continues to deliver a range of world-class published products that amaze us in terms of their scientific quality, breadth and, very often, their sheer beauty, but which serve also to project globally a powerful image of the very best of the Society's geoscientific endeavours.

Jonathan Turner
Publications Secretary

For the Society's world-renowned library, 2010 was dominated by the Library Review, (chair, former President, Prof. Peter Styles). Its report recommended closing the gap between income and expenditure by £105,000 (during 2012-14) by developing new and existing income streams and increasing the range and scope of Library services.

Caroline Lam was appointed as Archivist/Records Manager in April 2010. Initially she concentrated on clearing the backlog of modern records from the late 1960s on. Collections newly catalogued and available include records of the Institution of Geologists and predecessors, and Specialist Groups and Joint Associations.

The Society was very grateful for the donation of a relief map by the great grandson of William Topley FRS FGS (1841-1894). The map depicts the Weald of Kent and the Bas Boulonnais, and was created in 1875. We plan to place it on display in due course.

This year, four volumes were restored as part of the *Sponsor-a-Book* scheme. Special displays on President's Day and in the Fellows' Room highlighted the appeal. Thanks go to Dr Christopher Howells, Professor Alan Lord, Mr Stephen Palmer, Dr Susan Turner, and the Donations Committee of Maersk Oil North Sea UK Ltd for supporting us. Michael McKimm's *Rare book of the month* column in *Geoscientist*, generated much interest. There are many more items in the collection requiring conservation, and donations are always welcome.

In order to promote the collections and increase awareness, a new, regularly updated webpage was added to the Virtual Library, providing details of recently published thematic issues from both open access and Library remote access e-journals. Selected publications are also highlighted in the Society's newsletter.

In September the Library staff took part in *Open House London*, which celebrates the city's architecture by opening up buildings of outstanding architectural merit to the public. It provided many visitors with an opportunity to see inside the Society's apartments for the first time.

The Library also welcomed visitors, including the Institution of Structural Engineers and librarians from the Informal Serial Specialists' Network (ISSN). Tours were arranged for students from Imperial College and Portsmouth University and for the Society of Petroleum Evaluation Engineers.

2010 in figures…

- 10,000 enquiries handled by Library staff
- 616 enquiries about maps
- 266 new books by purchase, gift and exchange
- >900 maps loaned
- 245 new maps added to the collection
- 722 records added to the database of books, maps and serials
- 41,000 records of all types in the online catalogue
- 500 people given conducted tours (incl. 400 members of the public)
- 150 new scans added to prints archive
- 927 Fellows registered for Athens passwords (158 overseas)
- 70 electronic journals available
- 17,223 full text articles downloaded
- £8,787 from the fund was used to purchase material in the subject areas of Precambrian geology and ore deposits.

Education – securing the future

The Society interacts with education at all levels, from primary to university; helping excite and enthuse young people, providing support to teachers, accrediting degree courses, and supplying careers advice and guidance.

Schools link to Society

The Geological Society announced in November 2010 that over 100 schools had joined its Schools Affiliate Scheme. Open to all schools within the UK, the scheme aims to provide support to those schools wishing to understand more about Earth sciences and how to incorporate examples of the subject within the National Curriculum. For further information, please contact joanna.mears@geolsoc.org.uk

Geoscience Education Academy

In August 2010, with generous support from BP, the Geological Society was able to run its first residential Geoscience Education Academy at Burlington House for over 20 teachers, who came principally from chemistry, physics or biology backgrounds.

The GEA was designed to help those who do not necessarily teach geology as their main subject, but who do so as part of the national curriculum. In addition, it provided the Society with a useful link and direct insight into the pressures and issues surrounding today's science teachers.

Working in partnership with the American Geological Institute (AGI), who run several similar courses in the USA each year, teachers were able to meet a 'real' geologist, visit the Electron Microscopy and Mineral Analysis department at the Natural History museum, share ideas with one another and come away with a plethora of lesson plans and access to a wide variety of online resources. *JM*

- For further information on GEA 2011, please contact Joanna.mears@geolsoc.org.uk

HEN party

A new forum for geoscientists teaching and researching in the higher education sector was enthusiastically approved by Council in the Autumn of 2010. Called the 'Higher Education Network', this initiative is being developed with the Education Committee, the Higher Education Academy, GEES, ESTA and CHUGD (amongst others). It is anticipated that it will become one of a series of networks, taking an approach that cuts across disciplines, and has a more significant virtual presence and international following than a traditional Specialist Group. The inaugural meeting took place in January 2011 at the University of Leeds.

New Friends

Another activity that has lifelong learning at its core is the 'Friends of the Geological Society' scheme. By the turn of the year the Society had approximately 100 Friends; a group of strongly supportive interested amateurs whose involvement with the Society grew from the popular Shell London Lectures. Friends pay a modest annual fee for which they receive *Geoscientist*, a newsletter, and discounts on library use and Special Publications. Two exclusive evenings for Friends were held in 2010 – a lecture from the President, in July, on the 'hot blob' hypothesis; and a light-hearted look at geology as portrayed by the film industry in December, provided by Ted Nield.

Big Bang 2010

Sarah Day

In March 2010, the Society sent Earth Science Communicator Sarah Day to participate in the annual science fair *Big Bang* in Manchester. The event's theme this year was "Earth"; and while Earth science did not feature prominently either in the event or in the submissions to the *Young Scientist of the Year"* competition, it was heartening that the winner was announced as Thomas Hearing, an A level geography student from Thomas Hardye School, Dorset, with a project entitled *The Dorset and East Devon Coast World Heritage Site: a baseline study of Monmouth Beach's "Ammonite Pavement"*. Thomas, a Junior Candidate Fellow, was welcomed to President's Day 2010 and received the congratulations of the meeting.

The Society recognised the following students and teachers for achieving the highest exam pass marks in geology at "A" Level in 2010: Under the OCR Board – Samuel Niblett, Bishop Wordsworth's School, Salisbury – and teachers Mr Stuart Smallwood (Head, Bishop Wordsworth School) and Mrs Frances Stratton of South Wiltshire Girls' Grammar. Under the WJEC – Henry Phillips, The Kings School, Canterbury, and Mr Mark Lascelles, Head of Geography. Under the SQA – Samuel Shaw, Alness Academy, and Mr Alex Ferrie, Principal Teacher Geography/ Geology.

Higher education

Dr Bill Gaskarth
Chair, Accreditation Panel

The Society offers an accreditation service for University degree programmes in geology, through a process managed by Accreditation Officer Dr Colin Scrutton and Chair of the Accreditation Panel, Dr Bill Gaskarth. As well as providing a form of quality assurance to prospective degree candidates, holders of qualifications from accredited programmes can be confident that by the time they graduate, they will have satisfactorily completed the early stages of professional formation, on the road to Chartered Status (CGeol).

The Society now accredits 150 first degree programmes from 26 departments (more information online). Of these, two are overseas. Four taught Masters programmes from two departments are also currently accredited.

The Panel continues to monitor the progress of the Bologna initiative and the actions taken by accredited institutions to make their programmes Bologna-compliant. The purpose of the Bologna Process is to harmonise academic degree and quality assurance standards throughout Europe. Institutions should inform the Society (through Accreditation Officer, Colin.Scrutton@dunelm.org.uk) of any changes to their programmes as a result. Significant changes will require institutions to apply early for reaccreditation.

A number of retirements from and appointments to the Panel pool took place during 2010. Colin Brown, Malcolm Hart, Gilbert Kelling and Andy Rankin retired and we thank them for their valuable input. Malcolm and Gilbert were founder members of the Panel and we are sorry to lose their great experience of accreditation matters. Natalyn Ala, Peter Doyle, Sally Gibson and Roger Moore have joined, and we look forward to welcoming them to a future meeting.

Regional and national leadership

"Making geologists acquainted with one another" was one of the earliest purposes of the Society from its inception in 1807. That role continues through the activities of its Specialist and Regional Groups.

The Whitchurch High team receive their trophies

Schools challenge

The Society's vibrant South Wales Regional Group obtained extensive sponsorship to mount an ambitious quiz evening, which drew pupils from schools as far afield as Monmouth and Llanelli to Whitchurch High. There each team presented their ideas on "What can geologists do to save the planet?", and were put through their paces in a series of written and oral tests. The most taxing of the latter being President Designate Dr Bryan Lovell grilling the teams about what facts and ideas, in their presentations, they were "sure enough to tell a judge under oath", and what they felt less confident about.

This exercise proved highly revealing, demonstrating that the pupils had swotted their science, and displayed remarkable ability to make reasoned assessments of risk and practicality that would put many a politician – indeed, many an adult – to shame.

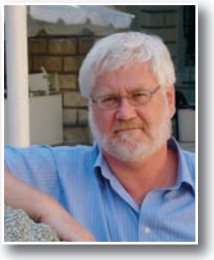
Winners by a narrow margin were the team from host institution, Whitchurch High. Trophies (courtesy of Halcrow) went to them; but as in all the best caucus races, everyone got prizes – teachers included. Hugh Jones-Williams, Head teacher, said: "Whitchurch High School was delighted to host the inaugural School Geology Challenge. It will no doubt become an annual event and the School looks forward to travelling away next year to defend its title, having won on home bedrock this year!". President Designate Bryan Lovell said afterwards: "You've got to get out there and meet the people who are actually doing things, not just sit in London talking to prefects. That way, you might actually learn something."

- The South Wales Regional Group Schools Geology Challenge 2010 was held on 23 March at Whitchurch High School, Cardiff. Competing were: Whitchurch High, Barry Comprehensive School, Cowbridge Comprehensive School, Amman Valley Comprehensive School, Monmouth Comprehensive School, and Coleg Sir Gar, Llanelli. The event was sponsored by Halcrow Group Ltd., Dargo Associates Ltd., WSP Remediation Ltd., Amgeuddfa Cymru (National Museum of Wales). Judges: Prof. Ian Hall (Cardiff University); Dr Bryan Lovell (Cambridge University); Ms Margaret McBride (Chair, SWRG); Paul Maliphant (Halcrow Group); Dr Ted Nield (Geoscientist);

Society at Orkney Science Festival

Not content with being a useful but remote part of life for most of us, science is on a mission to prove that it can also be fun, and has taken inspiration from the art world to do it. Howie Firth, who ran the very first in Edinburgh and now directs the Orkney Science Festival, explains.

"Back in the late 1980s, Glasgow was beginning to overtake Edinburgh as a city of culture. When it was awarded European city of culture in 1990, there was a real feeling that Edinburgh needed to diversify its image…as a city of science, and Edinburgh City Council came up with the idea of a festival. With the arts festival at the end of the summer, they thought – at the beginning of the season, in the spring, there should be a science festival!". Most importantly, this new idea held that it had to be fun, rather than 'improving'.



Staying on course

From the Treasurer

Despite the continuing economic uncertainties in the world at large the Society achieved a financial surplus of £178,445, £299,055 more than the 2010 budget anticipated. As with last year's good out-turn, this was again due to better than expected performances by a number of areas of the Society.

The Publishing House led the way, as in previous years, with a surplus of £512,810 against a budgeted surplus of £280,321. Journal activity played a large part in this with sales exceeding expectation and costs being below budget. The strong performance on sales is due to higher than anticipated trade subscriptions, foreign exchange gains and a better than projected share of the *GeoScienceWorld* (GSW) surplus. While lower journal costs largely reflect greater uptake than forecast of the Society's journals on-line by Fellows. Exactly how the world of publishing will further embrace new ways of working and electronic access in coming years remain some of life's mysteries. The ways that the Society has worked with GSW and developed the Lyell Collection give hope that it will be well placed to benefit from whatever direction, or directions, publishing moves.

Away from the Publishing House, room hire and investment income have both provided greater surpluses than expected. Cost control and new ways of working have also played their parts in the good financial result for 2010.

Beside the 'business-as-usual' income and expenditure of Burlington House and the Publishing House, the Society has invested £117,744 in the Library mainly in journal subscriptions, as well as an additional £32,791 invested in electronic journal licenses and spent £37,743 from reserves on achieving parts of this year's business plan.

The surplus of 2010 will bolster the reserves and this is welcome for three particular reasons. First, funds are needed for business plan items that will further the charitable objectives of the Society. Second, there is a need to set aside funds to enable the Society to meet the obligations of its Burlington House lease for refurbishment and maintenance. Third, during the year Council reviewed the Society's reserves policy and agreed the need to build up further the free reserves over a number of years.

As this is my final annual report as Treasurer, I would like to record my great thanks to those who have done all the work during my time in office. Edmund Nickless and the management team, with their regular scrutiny of the Society's finances, timely reactions and much improved system of monthly accounts, enabled the Society to weather, and keep an ongoing eye on, the financial storm that brewed up in late 2008 and continues to hover over us. Michael Kyriakides, Head of Finance, and his team in the Accounts Office dealt with the detail and provided the technical expertise necessary to navigate the financial jungle. Nic Bilham guided and facilitated the Budget and Programme Committee which now does the initial work on shaping the budget and overviewing the business plan before they go to the Management and Finance Committee and then to Council for approval. Neal Marriott and his colleagues in Bath wrestled to generate, and succeeded in keeping, a substantial surplus income stream coming in from the Publishing House. I would also thank those Fellows, and one non-Fellow, on the Investment Panel, who have worked to keep our investment managers' feet 'to the fire' and those Fellows on the Remuneration and Research Grants Committees who have dispensed wisdom in delivering their conclusions.

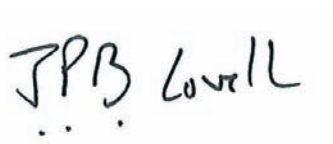
Prof Andy Fleet

Summarised financial statements

Balance sheet at 31 December 2010 – Group

		2010 £	2009 £
Fixed assets			
Tangible assets:	Heritage assets	**14,332,247**	14,214,503
	Other assets	**951,139**	1,173,906
Investments:	Listed and unlisted	**4,197,716**	3,965,981
	Portfolio cash	**14,247**	100,296
		19,495,349	19,454,686
Current assets			
Stocks: Finished goods		**225,747**	210,499
Debtors		**648,569**	572,595
Cash at bank and in hand		**1,833,155**	1,588,376
Held by specialist and regional groups		**133,998**	135,142
		2,841,469	2,506,612
Creditors: amounts falling due within one year		**420,120**	516,734
Deferred income		**1,533,154**	1,419,072
		1,953,274	1,935,806
Net current assets		**888,195**	570,806
Net assets		**20,383,544**	20,025,492
Unrestricted funds:	General purposes	**2,425,580**	2,084,185
Designated			
	Specialist and regional groups	**178,159**	189,203
	Revaluation reserve	**13,291,276**	13,291,276
	Burlington House Redecoration Fund	**240,730**	285,918
	Bicentenary Project Funds	**194,642**	310,437
	Lyell Centre Fund	**90,873**	128,615
	Bicentennial Outreach Fund	**175,000**	175,000
	Alan and Charlotte Welch Fund	**199,237**	199,237
Restricted income funds		**2,474,556**	2,297,200
Endowment funds		**1,113,491**	1,064,421
		20,383,544	20,025,492

The financial statements were approved by the Council on 13 April 2011



*Dr Bryan Lovell (**President**)*

*Prof Andrew Fleet (**Treasurer**)*

Summarised financial statements

Consolidated Statement of financial activities for the year ended 31 December 2010

	Unrestricted Income Funds	Restricted Income Funds	Endowment Funds	Total 2010	Total 2009
	£	£	£	£	£
Income and expenditure					
Incoming resources					
Donations, legacies, gifts and similar incoming resources	12,964	–	–	**12,964**	7,717
Activities in furtherance of the charity's objectives:					
Publications income	1,990,116	–	–	**1,990,116**	1,858,102
Conferences and events	684,613	–	–	**684,613**	618,721
Fellowship income	1,302,672	–	–	**1,302,672**	1,282,111
Investment income	65,162	125,936	–	**191,098**	169,608
Activities for generating funds:					
Hire of rooms	68,598	–	–	**68,598**	94,727
Catering	178,194	–	–	**178,194**	169,778
Total incoming resources	4,302,319	125,936	–	**4,428,255**	4,200,764
Outgoing resources					
Costs of generating funds					
Investment management costs	5,591	15,171	–	**20,762**	13,175
Catering	152,808	–	–	**152,808**	137,320
Charitable expenditure					
Costs of activities in furtherance of the charity's objects:					
Publishing activities	1,477,306	–	–	**1,477,306**	1,568,719
Conferences and events	918,336	–	–	**918,336**	855,892
Fellowship services	1,626,647	15,576	–	**1,642,223**	1,609,828
Governance costs	38,375	–	–	**38,375**	34,722
Total charitable expenditure	4,060,664	15,576	–	**4,076,240**	4,069,161
Total resources expended	4,219,063	30,747	–	**4,249,810**	4,219,656

Summarised financial statements

Consolidated Statement of financial activities for the year ended 31 December 2010 *(continued)*

	Unrestricted Income Funds	Restricted Income Funds	Endowment Funds	**Total 2010**	Total 2009
	£	£	£	£	£
Net incoming/(outgoing) resources before transfers	83,256	95,189	–	**178,445**	(18,892)
Transfer between funds	–	–	–	–	–
Net incoming/(outgoing) resources	83,256	95,189	–	**178,445**	(18,892)
Profit on investment assets	48,370	82,167	49,070	**179,607**	408,731
Gains on heritage assets	–	–	–	–	82,964
Net movement in funds	131,626	177,356	49,070	**358,052**	472,803
Fund balances brought forward at 1 January 2010	16,663,871	2,297,200	1,064,421	**20,025,492**	19,552,689
Fund balances carried forward at 31 December 2010	16,795,497	2,474,556	1,113,491	**20,383,544**	20,025,492

All amounts relate to continuing activities. All gains and losses recognised in the year are included above.

Full accounts (with notes) are available to view and download at www.geolsoc.org.uk/annualreview2010

Summarised financial statements

Independent auditor's statement

We have examined the summary financial statement for the year ended 31 December 2010 set out on pages 16–18.

Respective responsibilities of trustees and auditors

The trustees are responsible for preparing the summarised annual report in accordance with applicable United Kingdom law.

Our responsibility is to report to you our opinion on the consistency of the summary financial statement within the Annual Review with the full annual financial statements and the Trustees' Report

We also read the other information contained in the Annual Review and consider the implications for our report if we become aware of any apparent misstatements of material inconsistencies with the summary financial statement.

Our report has been prepared pursuant to the requirements of the Charities Act 1993 and for no other purpose. No person is entitled to rely on this report unless such a person is a person entitled to rely upon this report by virtue of and for the purpose of the Charities Act 1993 or has been expressly authorised to do so by our prior written consent. Save as above, we do not accept responsibility for this report to any other person or for any other purpose and we hereby expressly disclaim any and all such liability.

Basis of opinion

We conducted our work in accordance with Bulletin 2008/3 'The auditors' statement on summary financial statement in the United Kingdom' issued by the Auditing Practices Board. Our report on the charity's full annual financial statements describes the basis of our opinion on those financial statements and on the Trustees' Report.

Opinion

In our opinion the summary financial statement is consistent with the full annual financial statements and the Trustees' Report of the Geological Society of London for the year ended 31 December 2010.

BDO LLP, Statutory Auditor
Epsom
United Kingdom
13 April 2011

BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127)

Corporate Affiliates

Dr Colin Summerhayes
Vice President & Chair
Development &
Fundraising Committee

The Society extends its sincere thanks to all its Corporate Affiliates:

Platinum: Chevron North Sea Ltd; Shell UK Ltd

Gold: BG Group Plc; BHP Billiton; BP Exploration Operating Co Ltd; CGG Veritas Ltd; ExxonMobil International Ltd; Hess Ltd; NDA; Rio Tinto Mining & Exploration Ltd; Statoil; Total E&P UK Plc

Silver: Anglo American Plc; Cairn Energy Plc; Centrica Plc; ConocoPhillips

Bronze: Afren Plc; Anadarko Petroleum Corp (UK); ATP Oil & Gas (UK) Ltd; Baker RDS; Cairn Energy India; C&C Reservoirs Ltd; Citrus Partners LLP; CNR International (UK) Ltd; Desire Petroleum Plc; Dong E&P (UK) Ltd; ENI UK Ltd; EOG Resources United Kingdom Ltd; E.ON Ruhrgas UK; ERC Equipoise Ltd; Fairfield Energy Ltd; Fugro GeoConsulting Ltd; Fugro NPA; Fugro Robertson Ltd; Gaffney Cline & Associates Ltd; GETECH; GWP Consultants; Hannon Westwood LLP; Hardy Oil & Gas Plc; Ikon Science Ltd; Lafarge Aggregates Ltd; Landmark EAME Ltd; Lynx Information Systems Ltd; Maersk Oil North Sea Ltd; Micromine; MND Exploration and Production Ltd; Nautical Petroleum Plc; Neftex Petroleum Consultants; Nexen Petroleum UK Ltd; OMV (UK) Ltd; Ophir Energy Company Ltd; Petro–Canada UK Ltd; Petrofac Energy Developments Ltd; PGS Exploration (UK) Ltd; Premier Oil Plc; Premier Oil Norge AS; Ramboll UK Ltd; Rock Deformation Research; RPS Energy; RWE Dea UK Ltd; Sasol Petroleum International; Schlumberger Evaluation & Production Services Ltd; Senergy Ltd; Sterling Energy UK Ltd; Tullow Oil UK Ltd; Wiley–Blackwell; Valiant Petroleum Ltd

If your organisation would like to find out more about the benefits of becoming an Affiliate, please contact georgina.worrall@geolsoc.org.uk.

In addition to the companies listed above, the Society wishes to record its sincere thanks to all the companies, universities and other organisations that allowed their staff the time and resources to participate in voluntary Society activities.

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Registered Charity No. 210161

Photos: Scottish Natural Heritage
Edited by Ted Nield
Designed and printed by Witherbys