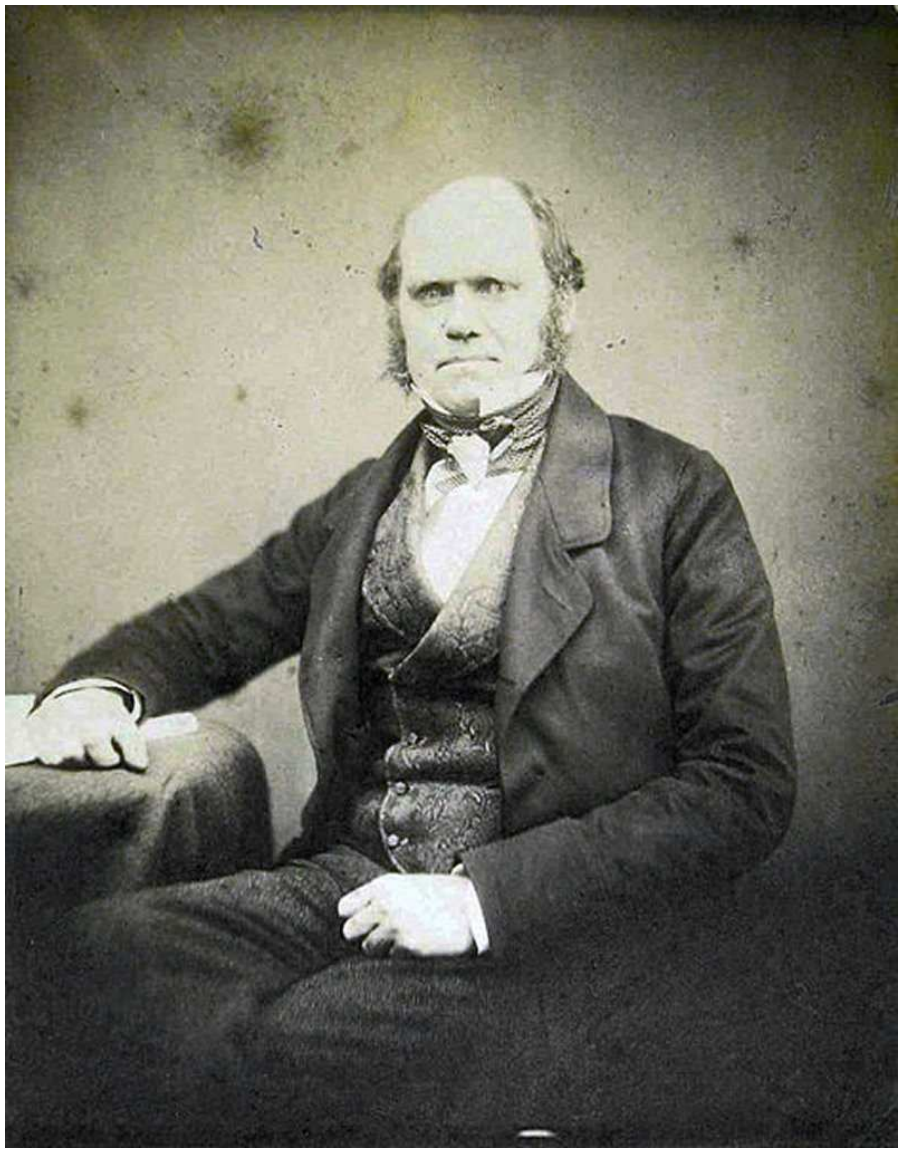
HOGG

Newsletter of the History of Geology Group of the Geological Society of London



Number 35
February 2009

Front cover

Photograph of Charles Darwin by Maull and Polyblank for the Literary and Scientific Portrait Club (1855).

The bicentenary of Darwin's birth and the sesquicentenary of the publication of his `*Origin of Species*' are celebrated in HOGG's Open Meeting in April, and Field Meeting to Glen Roy in June (details in this newsletter). Other Darwin `events' are also listed.

Editorial subcommittee
Beris Cox (e mail: beris.cox@btinternet.com), David Earle (e mail: daearle@btinternet.com), Dick Moody (e mail: rtj.moody@virgin.net)

The HOGG newsletter will be issued in February (copy deadline 31st January), June (copy deadline 31st May) and October (copy deadline 30th September).

LETTER FROM THE CHAIR

This is the first newsletter to be issued since the new HOGG Committee was established and we welcome Prof. Martin Rudwick and Dr Robert Symes, as well as Tony Brook who rejoins after a one-year break. Outgoing Committee members are Peter Tandy, who has done a sterling job in running the newsletter almost from HOGG's foundation, Nic Bilham and Dr Anne O'Connor as Secretary. Leucha Veneer succeeded Anne as Secretary during the latter part of 2008 with her appointment being ratified at the AGM in November. To all out going Committee members, I must extend our thanks for their support, enthusiasm and commitment.

I am hoping that I may pursue a bit of self indulgence in writing this brief informal column and use it to promote HOGG activities and any areas of interest to members.

Leucha has provided the following brief summary of events during the past year:

HOGG had another good year in 2008, with several interesting and well-attended meetings since our successful celebration of the Geological Society's bicentenary last November. These have included the very successful *Dinosaurs: A Historical Perspective* conference, at Burlington House in May, and the well-attended William Smith meeting and field trips in Scarborough, which also included the AGM. The committee continues to plan meetings for the coming year and further into the future.

HOGG's long-term commitments are also thriving. The Oral History Project is progressing well under Nic Bilham's capable supervision, although progress in 2008 has been slower than anticipated. Nevertheless, we are confident that you will soon be able to hear clips of audio material via HOGG's website and listen to memories of geologists working in decades past.

The Group's excellent publication record continues. The book from the bicentenary meeting, *The Origins of the Geological Society*, is in the final stages of production and will be out in June this year, and the Dinosaurs conference will also produce a volume of great interest not only to HOGG members but also much more widely.

Readers will notice that this issue of the newsletter contains a call for expressions of interest concerning a Spring 2010 meeting on *Geology in the History of Provincial Scientific Societies*. I feel that this is potentially a very important meeting which could lead to a worthwhile publication. I am already considering a contribution concerning the rich geological heritage within the Liverpool societies (Liverpool Lit. & Phil., Liverpool Geological Association, Liverpool Geological Society and Liverpool Naturalists' Field Club) during the eighteenth to twentieth centuries, and I am sure that many of you are aware of societies in your area that have similarly rich histories. If you would like to contribute, please contact Beris Cox, Leucha Veneer or myself.

Alan Bowden
February 2009

HOGG COMMITTEE 2009

Following the AGM held in Scarborough in October, the HOGG committee for 2009 comprises

Chairman Alan Bowden
Vice Chairman Dick Moody
Secretary Leucha Veneer
Treasurer Beris Cox
Ordinary members David Earle, Nina Morgan, Hugh Torrens, and newly elected members

Tony Brook
Tony Brook managed to survive the rigours of an old-style grammar school education in the 1950s to gain a place at Manchester University. He read for an Honours degree in Geography with subsidiary Geology, graduating in 1963. He then went to America for graduate study. He returned with an MA and worked for 30 years in a variety of jobs but, on retirement, decided to return to his intellectual first love researching and writing about aspects of geology. He is currently both an Extra-Mural Tutor and a part-time D.Phil student researching The Retail Revolution – Myth or Reality? at Sussex University.

Martin Rudwick

Professor Martin Rudwick was trained in geology at Cambridge, and did research for many years on the palaeobiology of brachiopods. He then moved into the history of science which he taught successively at Cambridge, Amsterdam, Princeton and San Diego before returning to live near Cambridge. He has published several books on the history of palaeontology and geology; the first was *The Meaning of Fossils* (1972) and the most recent a pair of volumes on the reconstruction of the Earth's history in the decades around 1800 – *Bursting the Limits of Time* (2005) and *Worlds before Adam* (2008). Many of his papers are reprinted in *The Science of Geology* (2004) and *Lyell and Darwin, Geologists* (2005). In 2007, he received the Sarton Medal of the History of Science Society, the first time its highest award has been given to an historian of the Earth sciences.

Bob Symes

See next newsletter!!

HOGG SUBSCRIPTIONS 2009

Annual subscriptions were due at the beginning of January. Those members who normally pay by cheque and have not already done so are asked to do so now.
Please send cheques (£15 *payable to* HOGG) to

Dr B M Cox (HOGG Treasurer)
151 Browns Lane, Stanton-on-the-Wolds, Keyworth, Nottingham, NG12 5BN

Many thanks!

SNAIL-MAIL OR E MAIL: HOW DO YOU RECEIVE YOUR NEWSLETTER?

The majority of HOGG members receive their newsletter electronically via the Geological Society's website where issues back to Number 29 (January 2007) are available to download as full colour PDF files. As soon as a new issue is put on the website, an e-mail is sent to members notifying them of its availability. It would be helpful to HOGG if those members who still receive their newsletter as a paper copy by post, could change to the electronic method. Please advise the secretary (e mail: hogg@geolsoc.org.uk) if you are able to do so.

FUTURE HOGG EVENTS

* **OPEN MEETING**
  WEDNESDAY 8th APRIL 2009
  Burlington House, Piccadilly, London
  Programme on page 4 of this newsletter.
  Registration Form on back page of this newsletter.

* **RE-TREADING DARWIN'S GEOLOGICAL FIELDWORK: THE PARALLEL ROADS OF GLEN ROY**
  FRIDAY 26th – MONDAY 29th JUNE 2009
  Lochaber, Scotland
  First circular on pages 6 -7 of this newsletter.

* **MILITARY USES OF HYDROGEOLOGY: PAST AND PRESENT**
  WEDNESDAY 18th NOVEMBER 2009
  Burlington House, Piccadilly, London
  Call for papers on page 5 of this newsletter.

* **GEOLOGY AND THE HISTORY OF PROVINCIAL SCIENTIFIC SOCIETIES**
  SPRING 2010
  Manchester
  Call for expressions of interest on page 5 of this newsletter.

HOGG OPEN MEETING
WEDNESDAY 8th APRIL 2009
BURLINGTON HOUSE, PICCADILLY, LONDON

Programme

9.10 - 9.30 REGISTRATION

9.30 - 10.00 Allison Ksiazkiewiecz
Some Intersections of Geology and Ancient Egypt

10 00 - 10.30 Thomas Hose
Sea-Air, Geology and Tourism

10.30 - 11.00 COFFEE

11.00 - 12.00 *Keynote address: Dr David Norman
Charles Darwin as Geologist
HOGG marks this year's twin anniversaries of Charles Darwin: his birth in Shrewsbury on 12th February 1809, and the publication of '*The Origin of Species*' on 22nd November 1859.

12.00 - 12.30 Anthony Brook
Agnes Crane: The Brighton Brachiopod Lady

12 30 - 1.30 LUNCH

1.30 - 2.00 David Bate
Evolution of an Erroneous Idea: Glaciation of the South Downs

2.00 - 2.30 Chris Duffin
Herbert Toms and Geological Folklore

2.30 - 3.30 *Keynote address: Dr Laurance Donnelly
Geoforensics
Sherlock Holmes, rocks, soils and murder

3.30 - 4.00 TEA

4.00 - 4.30 Ted Rose
Credit due to the Few: British field force geologists of World War II

4.30 - 5.00 Alan Bowden
Bryce Wright, mineral dealer, Lord Derby's Agate Collection and Britain's 'Darkest Hour'

5.00 - 5.30 David Greenwood
The Wartime Work of Professor Kirkaldy, with particular reference to 1944-46

****REGISTRATION FORM ON PAGE 19 OF THIS NEWSLETTER ****

MILITARY USES OF HYDROGEOLOGY: PAST AND PRESENT
WEDNESDAY 18th NOVEMBER 2009
BURLINGTON HOUSE, PICCADILLY, LONDON

CALL FOR PAPERS

A whole-day meeting at the Geological Society, Burlington House, Piccadilly, London, is being convened under the auspices of the Society's History of Geology and Hydrogeological Groups, supported by the Institution of Royal Engineers. It broadly follows the precedent of a meeting held in December 2002 on '200 years of British Hydrogeology'. Like that meeting, it is hoped that it will generate manuscripts to be worthy of peer-reviewed publication, as one of the Society's *Special Publications*.

Papers offered so far range from the use of groundwater as a valuable source of water supply in World War I to hydrogeological support for current operations in Afghanistan and include British, US and German perspectives. Additional contributions are invited for both presentation at the meeting as a paper or poster and/or for potential publication in the proposed book. Of particular interest would be papers which carry the history of the use of hydrogeology and the individuals who were involved back to the conflicts of the 18th and 19th centuries.

Registration and further details will be publicized later in the year, but those interested in contributing a talk or poster, and/or an article for publication, are asked to contact one of the conveners, Ted Rose (e-mail: ted.rose@virgin.net, home telephone: +44 (0)1494 728776) or John Mather (e mail: mather@jjgeology.demon.co.uk).

GEOLOGY IN THE HISTORY OF PROVINCIAL SCIENTIFIC SOCIETIES
SPRING 2010, MANCHESTER

CALL FOR EXPRESSIONS OF INTEREST

We are all aware of the bicentenary celebrations for the Geological Society held in 2007 and the sesquicentenary celebrations for the Geologists' Association held during 2008, but there are many provincial societies involved in geology (natural history, philosophical, antiquarian, as well as geological) which also have long and colourful histories.

The proposed HOGG meeting will look at any aspect of the history of these provincial societies - their membership, their activities, their publications, their collections, their relationship with each other and with the national societies, the personalities, their future.

Please address expressions of interest (indicating whether this is to give an oral presentation, a poster presentation or to attend) to one of the following:

Beris Cox	Leucha Veneer	Alan Bowden
e mail beris.cox@btinternet.com	e mail hogg@geolsoc.org.uk	e mail alan.bowden@liverpoolmuseums.org.uk

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RE-TREADING DARWIN'S GEOLOGICAL FIELDWORK: THE PARALLEL ROADS OF GLEN ROY
26TH - 29TH JUNE 2009, LOCHABER, SCOTLAND

Organised and led by **Martin Rudwick** (University of Cambridge) and
Adrian Palmer (Royal Holloway, University of London)

FIRST CIRCULAR

Darwin returned from the *Beagle* voyage identifying himself *as a geologist*, and he was accepted as such by the leaders of the Geological Society in London. His papers to the Society interpreted what he had seen in terms of a global tectonic theory modelled on that of his older mentor Charles Lyell. The most substantial piece of *fieldwork* that Darwin undertook (in 1838) after his return was designed to strengthen this theory by harnessing in its support a well-known but extremely puzzling geological feature, the "Parallel Roads" or horizontal terraces high up in Glen Roy and adjacent valleys in the Lochaber area of the Scottish Highlands. This fieldwork led to Darwin's first substantial published scientific paper (1839) and earned him his FRS. But soon afterwards Louis Agassiz (1840) proposed an alternative explanation of the "Roads", in terms of vanished glaciers, which implied that Darwin's might be radically mistaken. Yet Darwin clung to his interpretation for about twenty years, in the face of mounting evidence in favour of the glacial alternative, and only abandoned it with extreme reluctance, calling it in retrospect "a great failure" and even "one long gigantic blunder". However, even a "blunder" by such an outstanding scientist can throw instructive light on the relation between observations and scientific reasoning, and also - in Darwin's case - between his public theorising about global tectonics and his concurrent private theorizing about speciation.

This field meeting in Lochaber will be strictly *historical* (like the meeting on the Isle of Wight during the Society's bicentenary in 2007). It will focus not on current modern interpretations but on what Darwin and his 19th-century predecessors and successors saw, or thought they saw, on the spot, and how they reasoned about their observations. It will be based on Martin Rudwick's detailed study (1974/2005) of Darwin's (and others') work on Glen Roy, updated and related to Sandra Herbert's important book (2005) on Darwin's geology as a whole.

The meeting will be based at Spean Bridge (9mi/15km NE of Fort William), which can be reached by a scenic rail journey from Glasgow, or by road. It will begin on the evening of Friday 26th June and end after breakfast on Monday 29th June. The two full days in the field will be spent (1) in Glen Roy itself, and (2) in Glens Spean, Treig and Gloy. Even around midsummer, Highland weather on the hills can be harsh, and there will be some steep climbing and rough walking, so the meeting is not suitable for those who are not reasonably fit. Transport in the field will be by minibus or equivalent; the roads up some of the valleys are very narrow and parking is limited, so independent transport by private cars will not be possible. For the same reason, the number of participants will be strictly limited.

To register interest at this stage, contact Adrian Palmer (e mail: a.palmer@rhul.ac.uk). Further details, with a registration form, will be sent to those who have expressed interest, probably in March. Meanwhile, please address queries about the practical arrangements to Adrian, and queries about the scientific programme to Martin Rudwick (e mail: mjsr100@cam.ac.uk).

A closely related, but separately organised, historical field meeting will be led by Peter Worsley (University of Reading) on 19th-24th June, visiting (1) Shrewsbury and Maer, and (2) North Wales, to re-tread Darwin's 1842 fieldwork, during which he accepted a glacial interpretation of the

topography of Snowdonia. For further information , see page 10 of this newsletter. It should be feasible to take part in both meetings.

References:
Martin Rudwick. 'Darwin and Glen Roy: a "great failure" in scientific method?', *Studies in History and Philosophy of Science*, vol. 5, pp. 97-185, 1974; reprinted in Rudwick, *Lyell and Darwin, Geologists*, Aldershot (Ashgate), 2005, art. X.
Sandra Herbert. *Charles Darwin, Geologist*, Ithaca (Cornell), 2005.

LOST BOOKS

There are a surprising number of books which are known to have been printed but of which no copy apparently survives. In this and future newsletters, HOGG members will be alerted to such 'lost' geological books. Please provide feedback to Hugh Torrens (e mail: gga10@keele.ac.uk).

No. 1
Thoughts on the Formation of the Earth by a Farmer.
Published 1802 in Shrewsbury.

An anonymous review of the book was published in the *British Critic* of 1804 (vol.23, pp.447-448). The original book has yet to be located but, if found, may well prove to be the first geological essay to be published in, or written about, Shropshire.

See also the article by Hugh in the *Proceedings of the Shropshire Geological* Society, vol.12, pp.53-55 (2007) which is available on line at http://www.shropshiregeology.org.uk/sgspublications/Proceedings/2007%20No_12%2053-55%20Torrens.pdf

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GEOLOGICAL SOCIETY'S 'SPONSOR – A – BOOK' SCHEME

Michael McKimm

The Geological Society Library's Rare Book collection is one of the finest collections of antiquarian books on geology and related subjects, containing approximately 3500 volumes mostly published after 1800, as well as some 18th Century volumes and a few titles dating back to the 16th Century, and including impressive early volumes annotated by the 19th Century geologists who originally owned them.

Despite all our care and attention, however, the years have taken their toll on the bindings of many of these works and urgent preservation work is now required. The Geological Society Library would like to invite Fellows, Corporate Affiliates and other people or companies associated with the Society to help us with the conservation of these books

through our Sponsor-A-Book Scheme.

We have compiled a list of seven great books in greatest need of repair. Each has been individually assessed to decide the level of work needed – be it a new spine, retooling of lettering or completely new covers – with the emphasis on being as true to the original binding as possible.

A special bookplate will be placed in each fully restored book with the name of the person, persons or company who sponsored its restoration and the date that the work was completed (if you wish, of course, your sponsorship can remain anonymous).

The restored books will be exhibited for a period in the Lyell Room so that Fellows and visitors can see the finished product. The names of sponsors will also appear on our website.

Please sponsor one of these important books and help preserve them for centuries to come!

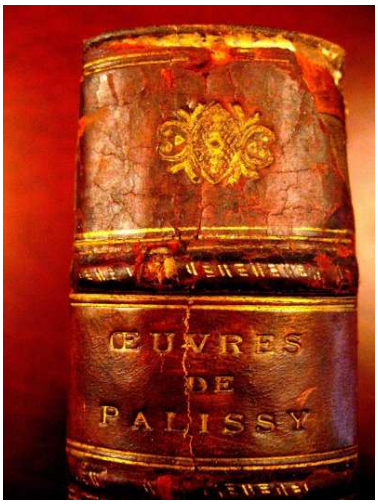
For more information, contact Michael McKimm:
The Library, The Geological Society, Burlington House, Piccadilly, London, W1J 0BG
tel: 020 7432 0999
e mail: michael.mckimm@geolsoc.org.uk

Title: *A treatise on astronomy*; Author: Herschel, Sir John F.W. (John Frederick William), 1792-1871 (ed.); Publ. Details: London: Longman, Rees, Orme, Brown, Green & Longman; John Taylor, 1833. Restoration Price: £200.00

Title: *Journal of a residence at the Cape of Good Hope; with excursions into the interior, and notes on the natural history, and the native tribes*; Author: Bunbury, Sir Charles James Fox, 1809-1886; Publ. Details: London: John Murray, 1848 Restoration Price: £200.00

Title: *Lettres mineralogiques et geologiques sur les volcans de l'Auvergne, ecrites dans un voyage fait en 1804*; Author: Lacoste, Pierre Francois, 1754-1826; Publ. Details: Clermont: De L'Imprimerie de Landriot, 1805; Restoration Price: £250.00

Title: *Ouevres de Bernard Palissy, revues sur les exemplaires de la bibliothèque du Roi*. Authors: Palissy, Bernard, 1510?-1590; Faujas de Saint Fond, Barthélemy, 1741-1819; Gobet, Nicolas, 1735-1781; Publ. Details: Paris: Chez Ruault, 1777; Restoration Price: £300.00



Title: *Outlines of British geology, chiefly intended to illustrate the geology of England and Wales: with some notice of that of Scotland and Ireland. To which is appended, a glossary of terms used in geology and mineralogy*; Corp. Body: Society for Promoting Christian Knowledge Publ. Details: London: Society for Promoting Christian Knowledge, 1850; Restoration Price: £180.00

Title: *Recherches sur les ossemens fossils de quadrupèdes, ou l'on rétablit les caractères de plusieurs espèces d'animaux que les révolutions du globe paroissent avoir détruites*; Author: Cuvier, Georges, Baron, 1769-1832; Publ. Details: Paris: Chez Deterville, 1812; Restoration Price for 4 Volumes + 1 Atlas: £2000.00; Restoration Price per single volume: £400.00

Title: *The coal-fields of Great Britain: their history, structure and resources. With notices of the coal-fields of other parts of the world*; Author: Hull, Edward, 1829-1917; Publ. Details: London: Edward Stanford, 1873; Restoration Price for 2 Volumes: £500.00

If you would like more information on these titles, such as size and details of plates, please go to: http://www.geolsoc.org.uk/gsl/info/catalogue or e mail michael.mckimm@geolsoc.org.uk

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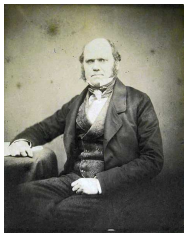
FUTURE MEETINGS OF OTHER BODIES



DARWIN DATES

THURSDAY 26th FEBRUARY 2009
CHRIST'S COLLEGE, CAMBRIDGE
Charles Darwin in Europe

A one-day colloquium on Charles Darwin in Europe will be held at Darwin's college, Christ's Cambridge, on Thursday 26th February 2009 to celebrate the bicentenary of his birth as well as the launch of *The Reception of Charles Darwin in Europe* edited by Eve-Marie Engels and Thomas F. Glick. The colloquium will continue the discussions begun in its pages.

Registration: £35.00 (£40.00 on the day)/Concessions £20.00.

Because of limited capacity, early registration is advised. Registraton and further details are available from RBAE@clarehall.cam.ac.uk

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WEDNESDAY 15TH APRIL 2009 at 4.30 pm
PALAEONTOGRAPHICAL SOCIETY
3rd Annual Address: Dr Lyall Anderson (University of Cambridge)
Charles W. Peach: one of Darwin's barnacle providers
Flett Lecture Theatre, The Natural History Museum, South Kensington, London

Darwin published his famous work on barnacles as a Palaeontographical Society monograph (1851-55).

Tea and coffee will be served beforehand in the foyer of the Flett Lecture Theatre from 4 pm.

Further information about the Society can be obtained from the Co-Secretaries Dr S. Long (s.long@nhm.ac.uk) or Dr P. Barrett (p.barrett@nhm.ac.uk) or from the Society website (http://www.nhm.ac.uk/hosted_sites/palsoc/).

FRIDAY 22nd – SUNDAY 24th MAY 2009
LYME REGIS FOSSIL FESTIVAL
ON THE THEME 'EVOLUTION ROCKS'

The Festival is being organised as part of the Darwin 200 festivities. See http://www.risingseas.co.uk/ or contact Dr Claire Old (e mail: claireold@googlemail.com).

FRIDAY 19th – WEDNESDAY 24th JUNE 2009
JOINT GEOLOGISTS' ASSOCIATION AND GEOLOGICAL SOCIETY MEETING
In the footsteps of Charles Darwin – NW Midlands and North Wales
Leader: Prof. Peter Worsley (Reading)

To commemorate the 200th anniversary of Charles Darwin's birth, this field excursion will visit a number of localities in his home area of Shropshire – Staffordshire and North Wales. Besides the general Darwin-related sites, the emphasis will be on his earlier work as a geologist and, in particular, his field trip in June 1842 to appraise the evidence presented by William Buckland in 1841 supporting the 'Glacial Theory'. A background to the latter may be found in *Quaternary Newsletter*, 112, 22-28 (2007) and the November edition of *Geoscientist* (2008). The excursion will be an opportunity to see aspects of the glacial geology of North Wales.

A significant amount of walking will be involved. Climbing over rough ground will be necessary in North Wales. Ensure you have suitable footwear and clothing. If you are in any doubt as to your ability to participate, please contact the Geologists' Association office (tel. 020 7434 9298; e mail: Geol.Assoc.@btinternet.com). The weather may necessitate modification of the programme. Register with Sarah Stafford at the GA office, sending a deposit of £10 to confirm your place.
NB *Numbers will be limited to 26*.

SATURDAY 11TH – MONDAY 13TH JULY 2009
SEDGWICK MUSEUM, CAMBRIDGE
Darwin in the field: collecting, observation and experiment
Convenor: Dr Lyall Anderson

This multidisciplinary conference will focus on Charles Darwin's (1809-1882) practical work in the field and examine the geological, zoological and anthropological data, observations and experiments upon which he built his subsequent theorizing. It will take place in the Sedgwick Museum of Earth Sciences in Cambridge as part of the programme of events to mark Darwin's 200th birthday and the 150th anniversary of the publication of *On the Origin of Species*.

The following speakers comprise a provisional list (more up-to-date details will be available from Lyall, e mail: land07@esc.cam.ac.uk).
Dr Peter Bowler (Belfast): *title to be confirmed.*
Dr Jonathon Hodge (Leeds): *title to be confirmed.*
Prof. Paul Pearson (Cardiff): *Darwin's Igneous Geology.*
Prof. Martin Rudwick (Cambridge): *Darwin and Glen Roy – the how and why of a 'Gigantic Blunder'.*
Dr Jim Endersby (Brighton): *topic relating to Darwin's Edinburgh years and Robert Grant.*
Dr Phil Stone (BGS Edinburgh): *An appreciation of Charles Darwin's Falkland Island fossils.*
Dr Gowan Dawson (Leicester): *Like a* Megatherium *smoking a cigar: Darwin's Beagle fossils in the nineteenth century.*

Prof. Brian Rosen (NHM): *title to be confirmed but either relating to coral reefs or NHM Darwin collections.*

OTHER DATES

FRIDAY 12TH –MONDAY 15TH JUNE 2009
8TH INTERNATIONAL MINING HISTORY CONGRESS
PENVENTON PARK HOTEL, REDRUTH, CORNWALL

For further information, visit www.huss.ex.ac.uk/history/imhc/index.php
or contact Dr Peter Claughton (e mail: p.f.claughton@ex.ac.uk).

MONDAY 28TH - TUESDAY 29TH SEPTEMBER 2009
GIOVANNI CAPELLINI MUSEUM OF GEOLOGY AND PALAEONTOLOGY, BOLOGNA, ITALY

The Giovanni Capellina Museum in Bologna is holding an International Conference on Vertebrate Palaeobiogeography to celebrate the centenary of the first display of its complete skeleton of *Diplodocus carnegiei*, gift of the American industrial magnate Andrew Carnegie. The magnificent plaster cast arrived in Italy in 1909 shortly after other copies had enriched the collections of London (1905), Berlin and Paris (1908); it is still a symbol of the international prestige of Bologna and the Giovanni Capellini Museum. The presence of the largest collections in Europe, a scientific, academic and cultural leadership position (sealed by the 2nd session of the International Geological Congress in 1881), and the vigorous work of Giovanni Capellini enabled Bologna to compete, and often outpace, institutions in more affluent cities. The palaeobiogeographical theme (*Vertebrate Palaeobiogeography across Tethys, Mesogea and the Mediterranean Sea*) has been chosen because it involves a wide spectrum of research fields that during the last decades have contributed greatly to our knowledge on the evolution of peri-Mediterranean and peri-Tethyan systems.

For additional information and registration details, visit www.museocapellini.org or contact
Dr Federico Fanti, Department of Earth and Geoenvironmental Sciences, University of Bologna – Alma Mater Studorium, Via Zamboni 67, 1-40127 Bologna, Italy.
e mail: federico.fanti@unibo.it

TWO HUNDRED YEARS OF ENGINEERING GEOLOGY

David Earle

In recent years, two meetings of the Engineering Group of the Geological Society have been concerned with the history of engineering geology (Keyworth 31 March 2007 and Burlington House 17 June 2008). These meetings concentrated on the lives and achievements of a number of British engineering geologists from William Smith to recent and current practitioners.

Volume 41 Part 2 of the *Quarterly Journal of Engineering Geology and Hydrogeology* (*QJEG*) May 2008 brings together papers on the individuals covered by the meetings with papers concerning the historical development of engineering geology in its practice and education. The following notes summarize the contents.

A general introduction is provided by Culshaw, Reeves and Rosenbaum *(Two hundred years of engineering geology)*. Turner then gives a wide-ranging account of the relationship between civil engineering and geology from antiquity to the present *(The historical record as a basis for assessing interactions between geology and civil engineering).*

A second group of papers deals with the work and influence of five engineering geologists:

William Smith (1769 – 1839)
Foster and Reeves *(William Smith and the development of engineering geology in England)* discuss the applied geological work of Smith (canals, mining, quarrying, drainage etc) which provided the groundwork for his mapping.

Fred Shotton (1906 – 1990)
Rose and Clatworthy *(Fred Shotton: a 'hero' of military applications of geology during World War II)* describe military geology and hydrogeology in the Middle East and Western Desert, in the preparation for the Normandy landings and in support of the European campaign.

Rudolph Glossop (1902 – 1993)
Williams and Norbury *(Rudolph Glossop and the development of 'Geotechnology')* present an account of the role played by Glossop in the early development of geotechnical engineering and engineering geology in the UK, based in part on the Glossop archive at Sheffield University.

Peter George Fookes
Charman *(Peter George Fookes: father of modern British engineering geology?)* gives an account of the work to date of Peter Fookes especially in terms of site characterisation and ground models, and includes a comprehensive bibliography of his publications.

William Robert Dearman
Reeves *(William Robert Dearman: Britain's first Professor of engineering geology)* describes the role played by Dearman in the development of engineering geology, and particularly engineering geology mapping as a technique in ground engineering.

A third theme (engineering geology education) is covered by two papers describing the work of Imperial College and Portsmouth: de Freitas and Rosenbaum *(Engineering Geology at Imperial College London; 1907-2007)* and Duncan, Poulsom and Browning *(Engineering geology and geotechnics: the role of higher education with particular reference to the undergraduate programmes at Portsmouth).*

Military aspects of engineering geology are dealt with in two papers – that on Fred Shotton by Rose and Clatworthy listed above, and *Terrain evaluation for Allied military operations in Europe and*

the Far East during World War II: 'secret' British reports and specialist maps generated by the Geological Section, Inter-Service Topographical Department by the same authors.

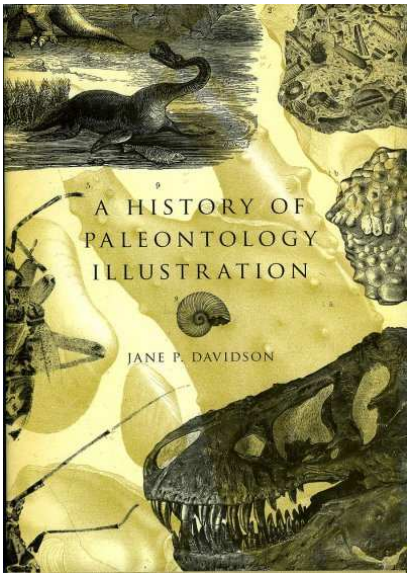
The volume also includes an account of the engineering geology of the Swiss Lotschberg tunnel disaster of 1908 – Waltham *(Lotschberg tunnel disaster, 100 years ago).*

BOOK REVIEWS

The History of Paleontology Illustration
Jane P. Davidson. 2008. Indiana University Press, Bloomington, 240pp.
ISBN 978-0-253-35175-3 (cloth) $39.95

Review by John Sibbick (freelance illustrator) www.johnsibbick.com
e mail jasibbick@btinternet.com
(This review first appeared in Newsletter 69 of the Palaeontological Association and is reproduced here with the permission of the author and the Pal.Ass.)

In the modern electronic media, the general perception of prehistory is of a time and place of danger and carnage – giant predators and prey all set in tropical lands and seascapes in multi-coloured splendour. Whether in movies, documentaries or any number of books and in today's interactive museums, these lively interpretations all begin with the fossil record. In a recent 'bones and stones' workshop that I conducted I encouraged parents and children to draw from life – a various selection of animal skulls, fossils and natural objects. The room became quiet as everyone was absorbed in their observations of patterns and structure. As the author, Jane Davidson, of *The History of Paleontology Illustration* remarks in her preface "even in the age of digital cameras and cellphones with cameras ..... students are still being instructed to draw their lab specimens".



This book covers five centuries of science-related illustration and the early chapters relate the obsession with collecting and recording fossils and other curiosities. Early illustration in an age of artistic realism converged with the dawn of modern scientific thinking and data from specimens were recorded in formal paintings and, sometimes, slightly whimsical engravings. Throughout the book, an episodic structure of subheadings is dotted throughout the chapters and describes the characters producing and commissioning artwork. The author gives the reader a comprehensive description of the different techniques of printed reproduction – for example, early woodcuts, copperplate engraving and etching, and later, highly detailed lithography and photo-engraving. All these processes are introduced and explained in sequence and, in many cases, she credits the technicians producing the plates as well the original artist.

Apart from the drawings of fossil specimens, the book encompasses restorations of animals and plants in their environments, sculpture, museum murals and paintings, and in the last chapters, the introduction of photography as a tool to record site digs and articulated skeletons, notably Henry Osborn's pair of tail-dragging, but very vitally posed skeletal *Tyrannosaurus rex* arguing over yet more bones. 20th century imagery is described in the last chapter and the highly influential Charles

Knight paintings and models dominate,as well as the beautiful sculptures of Irwin Christman, the museum artist at the American Museum of Natural History.

As a volume on illustration, a book must rely on its examples and we have a generously scattered selection of figures all in relative position to the text with concise captioning and dates which is very helpful to the reader. A number of stories and images will be familiar to many readers but the author gives fresh insight and perspectives to these accounts, for example, the enigmatic trackways of *Chirotherium*, Hitchcock's trackways and footprints. Additional to the often repeated story of Waterhouse Hawkin's tableau of sculpted dinosaurs and "fossil reptiles" for the Crystal Palace and the ill-fated Central Park project, the author has drawn on Hawkins' personal ephemera from his Scrapbook Album which is now in the The Academy of Natural Sciences of Philadelphia. Familiar as some of the illustrations are, the detail and clarity of the text, as well as this new material, gives a thorough insight into the quality of these works.

This book is a medium sized hardback priced at $39.95 and the one thing that lets it down is the quality of reproduction. In my copy, the quality of line and tone is a little soft and overall the illustrations have a somewhat grey appearance to them and in a few examples a quality of xerox as a source. The rather small selection of eight colour plates could have been enhanced by including a wider range of influential artists. Good examples could have been Rudolph Zallinger's or Jay Matternes's murals or everybody's favourite Zdenek Burian's impressionistic paintings and perhaps a classic example of a Douglas Henderson environment whose influence can be seen in the work of many illustrators working today.

This is a well written and researched book which can be read chronologically or as a source of reference. It cries out for a larger format and higher production values but it can be recommended to anyone interested in the history of paleontology and scientific image-makers who created work of such quality.

A Natural History of Time

Pascal Richet. 2007 (translated from the French 1999 edition by John Venerella). University of Chicago Press 471 pp.
ISBN-13: 978-0-226-71287-1. ISBN-10; 0-226-71287-7 $29.

Review by Professor Euan Clarkson, School of Geosciences, The University of Edinburgh
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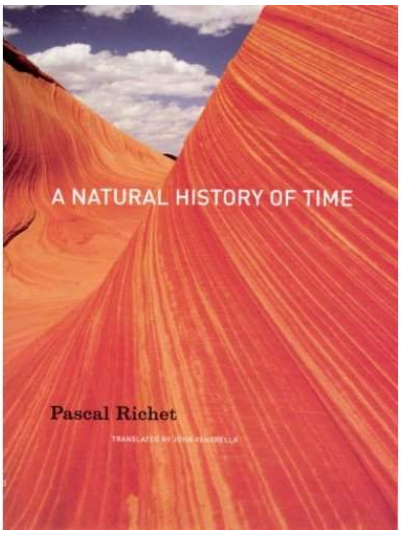
(This review first appeared in Newsletter 69 of the Palaeontological Association and is reproduced here with the permission of the author and the Pal.Ass.)

As scientists, we take for granted the immense and virtually incomprehensible dimensions of our universe (or is it a multiverse?) in space and time. We all know something about James Hutton. But of his precursors, and of the climates of thought in earlier times regarding the nature and dimensions of time, most of us are significantly less well-informed. In this thorough, scholarly, illustrated, and eminently readable book, one encounters not only the legacy of many unfamiliar thinkers, but also a lively commentary on those who are much better known. Professor Richet is a geophysicist, yet he presents his material with all the erudition and competence of a first-rate professional historian, and he builds up a compelling story of the discovery, and quantification of time.

The thinking of the ancient Greek philosophers (Chapter 1) was free, untrammelled by any prevailing orthodoxy. They were able observers. Their view of time was basically cyclical, most of them accepted that fossils were the remains of once-living organisms, and that in places, where once was land, now there is sea. Yet as Aristotle believed, these were small changes, by comparison with the vast duration of the universe, and there was no possibility of trying to reconstruct the history of the eternal earth.

In Chapter 2, we see the Greek cyclical view of time replaced by the Mosaic linear concept; the Earth had been created at a particular moment, and all subsequent history was required to fit into this framework. And for well over a thousand years, an orthodoxy prevailed, which gave the age of the Earth at some 6000 years, from which there was no escaping. This book is not in any way a documentary on the conflict between science and religion, yet the complex history of such issues during the 15th to the late 18th centuries is given appropriate coverage. Whereas such a brave spirit as Giordano Bruno went to the stake as late as 1600 for his heretical views about the infinity of the universe there were others, before and after him who began to escape from the clutches of confining orthodoxy. Such men as Baruch Spinoza and Richard Simon were of such a kind, but they were very careful of what they actually said.



In Chapter 3, we see further characters, further developments in thought. Galileo, Boyle, Hooke, Newton, and so many others espoused new models of the universe, heliocentrism became no longer seriously doubted. Newton was fascinated by chronology. And the then young Edmund Halley began to study salinity in lakes and wondered whether it could be used as a chronometer. Yet he did not publish his thought for many years, for fear of censure. Just how hard it must have been for these brilliant scientists to argue against the monolithic orthodoxy of the time comes through clearly. Yet so many of them were original thinkers Then people began to study fossils in earnest (Chapter 4). Were they sports of nature (*lusus naturae*) as many asserted? Were they the remains of dead animals, somehow turned to stone? Nikolaus Steno had dissected a dead shark, and compared its teeth directly with fossil teeth found in rocks. For him, and also for Robert Hooke, who had made microscopical preparations of fossil wood, there was no doubt that they were the remains of formerly living organisms. Might they have been relics of the Great Flood? If so, how are great numbers of fossils found on high mountain tops to be explained? To Leonardo da Vinci, who had studied layering in rocks, there was no question about it. The Great Flood had nothing to do with it. Yet in most circles, Mosaic chronology still prevailed.

Then came the remarkable Georges-Louis Leclerc, Comte de Buffon, a gifted mathematician, naturalist and surely one of the most remarkable scientists of all time (Chapter 5). For 48 years, he was the Keeper of the Royal Botanical Garden. And very perceptively he wrote " The past is like distance, our sight diminishes within it, and it, itself, would soon become lost, had not history and chronology placed some lanterns, some torches, at the darkest points". And he himself lit some of these same torches. Whereas his own scale for the age of the Earth was no more than 75 000 years he was singularly influential on his successors. By the end of the 18th century had come a new generation of observers (Chapter 6), both of the cosmos and the Earth itself. These were the scientists of the heroic age of geology (c. 1775-1825). Both the immensity of time, and the use of fossils in providing a relative chronology were beginning to be understood. And the grip of orthodoxy was weakening. In the early 19th century, Pope Pius VII admitted that the 'days' of

Genesis were simply indeterminate periods of time. As has been noted, the 'delimiting line was not between religion and science but between the old and modern of each'. By the middle 19th century, the Mosaic time scale no longer held sway.

So, we have a relative time scale, but how can it be quantified? Most of the rest of this book is devoted to precisely that question, and although this period in history will be more familiar to many of us, it is fascinatingly illuminated here. In Chapter 7, we read of Fourier, and his obsession with the conduction of heat through a body. He survived the Revolution, and developed his theory of heat, the foundation of all we know on this subject today. But Lord Kelvin used this theory to advocate that the Earth could not possibly be as old as the geologists and palaeontologists would like it to be. Calculating the age of the Earth from time taken to cool from an originally hot state, not less than 20 million and not more than 400 million years could have elapsed. A likely figure was 100 million years (Chapter 8). It may be tempting to cast Kelvin in the role of the Bad Man. But no, he was a truly great scientist, and a courteous gentleman. In 1869, he had noted that 'British popular geology at the present time is in direct opposition to the principles of natural philosophy', and his stranglehold on the geological time scale lasted for some 50 years, discomfiting the geologists exceedingly. They could not, after all, determine their own timescales with any degree of precision, from geological criteria alone.

But then, starting in 1895 (Chapter 9), we have the discovery of the strange behaviour of uranium salts, emitting radiation of a then unknown kind. Becquerel, and then the Curies had discovered radioactivity. This remarkable period in the history of science is eloquently dealt with here, as is the impact of the understanding of radioactivity in replenishing the internal fires of the Earth (Chapter 10). By 1904, Rutherford recounted that Kelvin had limited the age of the Earth, 'provided that no new source was discovered'. But although Kelvin died in 1907, unconvinced that radioactivity had any part to play in continually heating the Earth, the stage was set for further developments. Along came Arthur Holmes, living in Britain and surely the father of radioactive dating methods (Chapter 11), as well as Barrell and Chamberlin in America, who applied rare radiometric data to the stratigraphic record, wherever it was possible. The beginning of the Cambrian was pushed back to some 500 million years. This was fine, but the ages of stars, as then available seemed to be considerably less than the age of the Earth! But this was not to last long, it was sorted out by the astronomers, and it is now agreed that the age of the universe is some 12 000 and the age of the Earth some 4600 million years. In Chapter 12, tribute is paid to the work of magnificent, though perhaps less well-known scientists, Gerling, Houtermans, Patterson and others who developed the use of isotopes to make radiometric dating reliable, precise, and repeatable. Astronomy, physics, geology and palaeontology all have contributed to our present understanding of time, and they all dance to the same tune. A final Epilogue completes this remarkable, erudite book, followed by mathematical complements, sources, suggestions for further reading, and an extensive bibliography.

It is sad to reflect that in spite of all the labours of so many brilliant scientists, as documented here, the creationist lobby still has a considerable following. Just this day I heard that a fine explicative panel at Siccar Point had been mysteriously, and deliberately vandalised……

OBITUARY NOTICES AVAILABLE

Stuart Baldwin has kindly given Hugh Torrens a pile of obituary notices of past geologists etc amongst which are many duplicates. If HOGG members have particular such people in whom they are interested, Hugh will endeavour to see if there are relevant notices available. Contact Hugh by e mail: gga10@keele.ac.uk

The following articles by HOGG committee member Nina Morgan first appeared under the banner of `Distant Thunder' in the Geological Society's magazine *Geoscientist* where Distant Thunder is a regular column featuring anecdotal evidence from the history of the Earth sciences. The column began in April 2008 (vol. 18.4) and the full series of articles is available online at http://www.geolsoc.org.uk/gsl/geoscientist/people/page3736.html. Selected articles are reproduced in the HOGG newsletter with the permission of the *Geoscientist* editor and the author. Nina is a freelance science writer based near Oxford.

GEOLOGY'S ULTIMATE MR WHITEGOODS

Nina Morgan

To the proverbial man on the Clapham omnibus, Dennis Curry (1912-2001) was best known as the managing director and later chairman of Curry's, a firm founded by his grandfather in the early 20th Century. Under Dennis Curry's stewardship, Curry's was seen as a successful and familiar high street retailer of domestic electrical goods. But to geologists in the UK, Dennis Curry should be best known as one of the most generous benefactors geology has ever known.

Although business was his profession, geology was his passion. His geological interests were sparked as a small boy when he discovered fossils in the chalk. He went on to study science at Cambridge, and throughout his life devoted as much time as possible to the study of geology. His publications cover topics ranging from the British Lower Tertiary, benthic foraminifera, cephalopods and pteropods to the rocks of the English Channel. On a personal level, stories abound of the kindness and support he offered to other geologists, not to mention the financial support he provided to geological societies. Both the Geologists Association (GA) and the Geological Society of London have much to thank him for.

His gift of Curry's shares form the basis of the GA's Curry Fund, which provides grants to promote a wider public understanding of geology. The results of his share donations to GSL were even more staggering. Dividends from the shares ensured the future of the Library. And proceeds from their eventual sale allowed GSL to set up its publishing house in 1987. As if this were not enough, Curry went on to assign his share of a family trust fund - amounting to nearly £400,000 - to the Geol. Soc.

When the money arrived in 2004, the treasurer found only one word to describe it: Hurrah!

Acknowledgments and references Sources include an obituary of Dennis Curry, by Jake Hancock, published in The Independent, 30 March 2001; and Chapter 9 of *Whatever is Under the Earth: The Geological Society of London 1807-2007* by Gordon Herries Davies. The article first appeared in *Geoscientist* 19.1 (January 2009).

ON TRACK

Nina Morgan

In August 1835, the geologist John Phillips, keeper of the Yorkshire Philosophical Society Museum, freelance lecturer and assistant general secretary in the British Association for the Advancement of Science (BA), travelled to Dublin to prepare the ground for the annual BA

meeting. This was his first visit to Ireland - and his first experience of travelling by train. In a letter to his sister Anne, dated 25 July 1835, he describes the hair-raising experience (all the French errors are *sic!*):

"Mais hélas! ou suis-je? - Est ce que Monsieur va par le chemin de fer a Liverpool? a Warrington? a Wigan? Tenez Monsier, permettez moi d'arranger votre baggage. Ah! oui je vois tres bien, que ce grand portemanteau a joli soi de nuit, et ce -- de'alle comment s'apelle cette petite boite? -- So like a lump of sugar I was tossed in & my baggage upon the Railway Auxilium Omnibus (What Latin?) & away we drove. -- Entered the Train & the Railway & fly Jack & be gone. In 80 minutes we reached Liverpool 32 miles, & soon by another Omnibus were landed at our several hotels. My dear Annie You must certainly come to feel the strange impression of this flying Stead of Iron [*sic*]. It does so hurry & flurry on, you shake & sleep & start & wonder at the gliding Houses[,] trees & Churches, -- the trains which meet & pass you like the swiftest birds with a rushing sound & the Master power (Steam) & a confused picture of colours & forms not at all distinct as Men[,] Women, Carriages &c that it is all like magic & can not be understood by a mere description. Then you are dragged through a tunnel full of gas lamps, then laid hold of by ruffian porters & crammed into an Omnibus whether you will or no & whirled away the man who guides (only) knows whither. *Me Voilâ."*

And you thought commuting into London was difficult!

The letter quoted is one of a series of 234 from John Phillips to Anne Phillips preserved in the archives of the Hope Library at the Oxford University Museum of Natural History (OUMNH) (www.oum.ox.ac.uk). I am grateful to the Acting Director of the OUMNH for permission to quote from the letter, and to librarian Stella Brecknell for all her help with this project. This article first appeared in Geoscientist 18/10 *(October 2008).*

Dinosaurs and other Extinct Saurians: A Historical Perspective Abstracts Book

Compiled and Edited by **Richard Moody, Eric Buffetaut, David Martill, Darren Naish**

MAY 2008. ISBN 978-0900717-75-8

Beautifully illustrated record of the successful conference held in 2008. Copies available for £5.00 including postage. Contact Professor Richard Moody at rtj.moody@virgin.net or via R. J. Moody, Gnoll House, 15 Forster Road, Guildford, Surrey, GU2 9AE. Cheques to be made out the The Dinosaur Society.

HOGG Open Meeting
Wednesday April 8th 2009
Registration

The Chairman and Committee of the History of Geology Group would like you to attend the Open Meeting on **Wednesday 8th April 2009** at **Burlington House, Piccadilly, London**. The programme is given on page 4 of this Newsletter.

Please complete this form and return it as soon as possible, together with your cheque for the appropriate amount made payable to HOGG, to:

Anthony Brook, 15 Cambourne Court, Shelley Road, Worthing, West Sussex BN11 4BQ

I/We wish to register for the Open Meeting on April 8th:

Name: _____ Number attending _____

Address: _____

_____

Tel.:_____ E-mail: _____

Meeting Fee

1) For Member of HOGG £20
2) For a) Fellows of Geological Society £25
   b) Members of Geologists' Association £25
3) For all others £30

Thank you for registering in advance. We look forward to seeing you.

_____