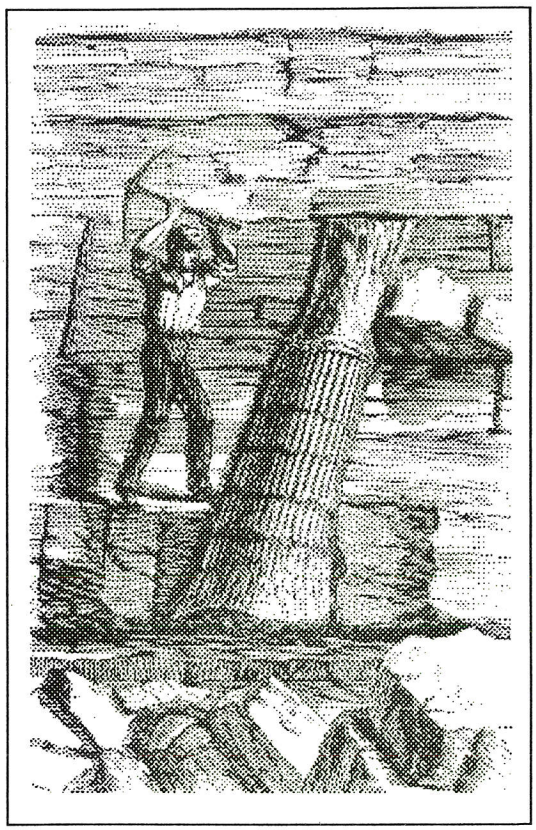
HOGG

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



Number 26
January 2006

Cover Illustration:

Fossil tree at Joggins, Nova Scotia, (John William Dawson, 1868). In this typical carboniferous-age locality, Dawson found and described giant trees several metres tall in fluvial sandstones. These proved to him that they must have had an in-situ origin, particularly as they show extensive root systems which penetrate into the mudstones (or coal seams) below. Some even show small amphibeans preserved within the root system. Dawson's interpretation is very similar to current thoughts

Editor: Peter Tandy, Department of Mineralogy, The Natural History Museum, Cromwell Road, London, SW7 5BD (tel: 020-7942-5076; fax 020-7942-5537; e-mail pt@nhm.ac.uk)

HOGG's BICENTENNIAL ORAL HISTORY PROJECT

Cherry Lewis

I am delighted to tell you that HOGG has been awarded funding from the Geological Society of London's Bicentennial Project so that older Fellows of the Society can be interviewed by volunteers with an interest in the recent history of the geosciences. This will create an oral history archive of incalculable value to future historians.

I would particularly like to thank Nic Bilham, one of the new members on the committee, whose idea this was and who put the proposal to the Geological Society so successfully. Nic will be heading up the project in conjunction with the Secretary, Anne O'Connor.

We are initially looking for people to interview who joined the Geological Society in the 1950s or before. We are also looking for people prepared to do some interviewing. Training will be given on how to use the equipment and what kind of questions to ask. Again, if you would be interested in this, please contact Nic.

The plate tectonics revolution and other significant developments in the geo-sciences have taken place within living memory. During the working lives of some of the Society's Fellows, there have also been great cultural and social changes in the profession of geology. New pro-fessional and academic disciplines have emerged, the place of the geosciences within society has evolved, and working cultures have changed radically. To some historians, such social, cultural and economic changes are just as interesting and significant as 'scientific' developments – indeed, many would argue that they are inextricably bound together. The re-collections of these people and their in-sights into the changes that have taken place in the geological world during their lifetimes, will constitute a rich resource for current and future historians, will be of general interest to many working geologists interested in the development of their subject, and will provide a fitting commemoration of the Society's bi-centenary in 2007. The involvement of a range of people will make this a project for the whole community, particularly if some younger Fellows take part.

The oral history material gathered could be used in a number of ways, as well as constituting an enduring resource. Short transcribed sections might be used in printed materials for the bicentennial conference and audio material could be played in appropriate spaces at this and other celebratory events. It would also make ideal material for radio and might provide a point of interest to attract air time. Audio material could also be made available on the Society's website. A proposal to publish a book of transcribed interviews may be put forward at a later date.

Further information

If you are interested in further details about this project, please contact Dr Nic Bilham at: The Geological Society, Burlington House, Piccadilly, London, W1J 0BG.
Tel: +44 (0)20 7434 9944 or:
Email nic.bilham@geolsoc.org.uk

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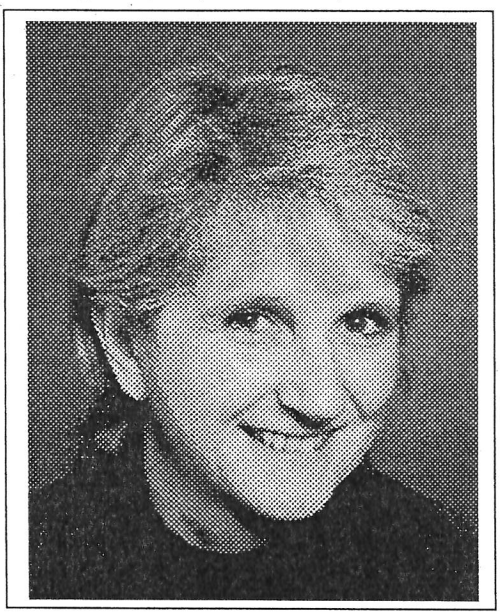
HOGG Annual General Meeting, 2005

The Annual General Meeting of the Group took place on Monday 28th November, during the Women in Geology meeting. The minutes of the previous meeting (2004) were taken as read and there were no matters arising. Two new Committee members were elected following an electronic vote of candidates. They are Dr Nick Bilham, and Professor Richard (Dick) Moody. Thanks were given to Bill George who stood down as Treasurer from the committee after completing his 3-year stint.

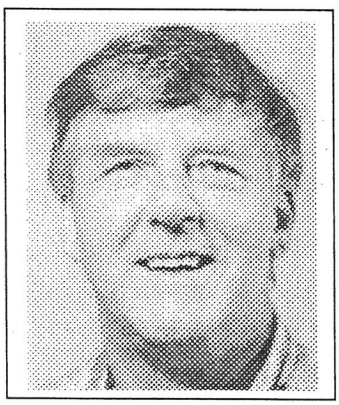
The HOGG Committee, 2005-2006

Cherry Lewis (Chairman)



Cherry was formerly the Secretary of HOGG, a post she has held for three years. Having been seconded to the committee in 1999 in order to convene the Geological Society's flagship meeting on the Age of the Earth, she has subsequently championed the history of geology within the Geological Society and other and other institutions .She is a UK representative on the International Commission on the History of Geological Sciences, and represents the West of England Geological Association as a trustee of the Bath Royal Literary and Scientific Institution. Cherry is the author of *The Dating Game* which documents the history of geochronology and the life of Arthur Holmes, one of the earliest pioneers in this field. She has participated in many radio programmes, including Melvyn Bragg's 'In Our Time', and was a contributor to the BBC TV series on Leonardo da Vinci. At present she works for Bristol University as Research Publicity Officer, having previously worked in the oil industry for 10 years. She holds a PhD in geochemistry.

John Mather (Vice Chairman)



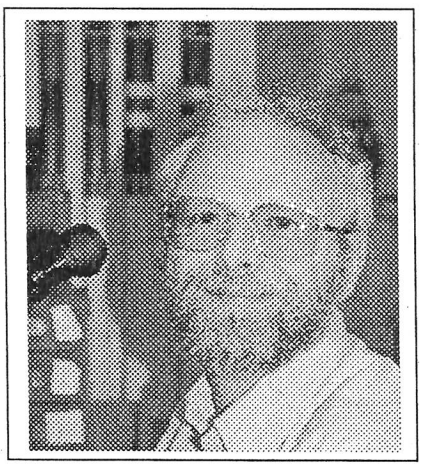
John joined the Geological Survey in 1966 following a Ph D in metamorphic petrology at Liverpool University. Posted to the then Water Department, he worked in the UK and overseas before moving to AERE Harwell in 1973 to manage a programme on the geological disposal of hazardous and radioactive wastes. Seconded to NERC headquarters in 1983 he returned to BGS as Chief Hydrogeologist in 1986 and became Assistant Director and Head of the Geochemistry and Hydrogeology Directorate the following year. In 1990 he was appointed Lyell Professor of Geology at Royal Holloway, University of London from where he retired in 2001. He currently lives on the edge of Dartmoor where his interests include restoring part of a converted hotel, ceramics and the history of hydrogeology. He convened a meeting on "200 years of British Hydrogeology" in December 2002 and a Geological Society Special Publication based on this meeting will be

published early in 2004, and the History of Geological Speleology and Cave Finds in April 2005.

Anne O'Connor (Secretary)

Dr. Anne O'Connor is a Research Fellow in the Department of Archaeology at Durham. She works on the historical connections between Quaternary geology and Palaeolithic archaeology in the nineteenth and twentieth centuries, and is writing a book on the antiquarian, William Greenwell (1820-1918), barrow-digger and inventor of the trout-fishing fly 'Greenwell's Glory'. Anne wrote her doctoral thesis on the history of Palaeolithic research in Britain between c.1860 and 1960. This subject relied heavily upon the contributions of geologists who came from a broad range of different backgrounds. Their varied interests in different aspects of Quaternary geology (glacial geology, river sediments and palaeontology) led to some fascinating arguments over the patterning of the Quaternary record, and these had important implications for interpretations of stone tools. Anne also has a general interest in the wider history of geology.

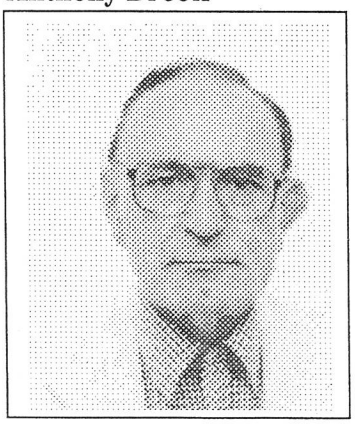
Alan Bowden (Treasurer)



Alan is currently Curator of Earth Sciences at the National Museums Liverpool. After gaining an M.Sc in Marine Earth Science at University College London he spent two years working as both a petrographer and biostratigrapher whilst working in a Quarrying Consultancy. A spell of ten years then ensued in the service sector of the Petroleum Industry before leaving to work in museums.

Professional interests revolve around palaeontology, meteoritics, planetary science and the History of Science (geology and astronomy). For the last ten years he has been an external dissertation supervisor for the University of Liverpool's M.Sc course on the History of Science and Technology. His interests in the History of Science are largely concerned with 17th/18th century Cosmogonies, planetary observations and the early history of petrology leading to the work of John MacCulloch and his geological mapping of Scotland. A current project is as one of the co-editors on a forthcoming Geological Society Special Publication on the History of Palaeobotany.

Anthony Brook



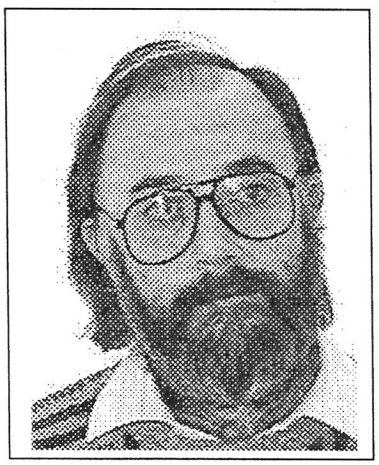
Anthony was born a week before the fall of France in the War and managed to survive the rigours of an old-style grammar-school education in the 1950s to gain a place at Manchester University. He read for an Honours degree in Geography with subsidiary Geology, graduating in 1963 with a II.i. He then took Horace Greely's famous advice to 'Go West, young man' and went to America for graduate study. He returned with an M.A. and worked for 30

years in a variety of jobs, but on retirement decided to return to his intellectual first-love, and henceforth to research/write about aspects of geology, only now with a lifetime's perceptions and experiences. He currently has a dual relationship with Sussex University: as an Extra-Mural Tutor and as a part-time D. Phil student researching TheRetail Revolution – Myth or Reality?

Cynthia Burek

Cynthia is a professor at University of Chester, with a personal chair in Geoconservation. She lectures in Earth science and on some of the History of science modules. A Quaternary geologist by training, but a conservationalist by choice, she has participated in a 3 year European project on getting history of science into the secondary curriculum at European level. This was completed in 2002 with the publication of a book - The role of the history of science in secondary Education. She is actively undertaking research in women in the history of geology and has recently run a conference on the Role of women in the history of geology at the Geological Society of London. This will result in a Geological Society book to be published in 2007. She has written several articles on women geologists in Earth Heritage, Teaching Earth Science, Geology Today, Cork Geology Journal and several encyclopaedia entries. And was co-editor of the Geological Society Special publication History of Palaeobotany published in 2005. Work is in progress on further articles. This is an area that she feels is important as providing role models for getting female students to think about geology as an area of study through history.
In 2006 she is helping to organise a conference on the history of Geoconservation reading a paper on the history of the RIGS movement and the LGAP process. She has served on the HOGG committee for several years and has been a Fellow of the Geological Society since 1971.

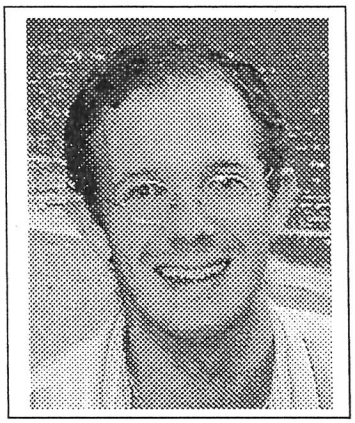
Peter Tandy (Newsletter Editor)



In 1994 Peter attended his first Geological Society meeting at Burlington House, and found himself 'volunteered' to act as editor of the newsletter of the newly-formed History of Geology Group. Now, issue number 20 is reached, with Peter having held the position unbroken for the past 9 years. His background is one of mineralogy, having entered the Mineral Department of the Natural History Museum in 1971 straight from school, and still there 32 years later. In that time he gained an Honours degree in Geology from Birkbeck College. For all but a tiny percentage of his time in the museum, his role has been to acquire, identify and catalogue new acquisitions to the collection of minerals, and generally to nursemaid the National Collection of minerals. Although in youth he tended to eschew history, over the past years his interests (not only geological) have turned towards it, and he finds great reward in reading of the achievements of immensely clever people (often amateurs) in unraveling complex stories from scant evidence, or in furthering science and technology. He has had a number of small roles in editing newsletters ranging from a now defunct NHM staff newspaper in which he

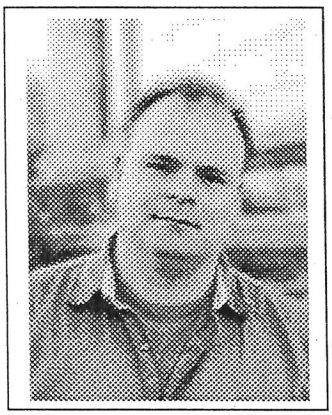
was largely responsible for a commemorative century "1881" edition in 1981, to a small newsletter catering for collectors of antique typewriters! Outside of work, he has interests in almost anything except most poetry, ballet & modern art, but particularly indulges in books (history of technology & social history mainly), 'real' art (especially trompe l'oeil), football & cricket, real ale ("Sarah Hughes is my all-time favourite!")..... and sundials!"

Nic Bilham

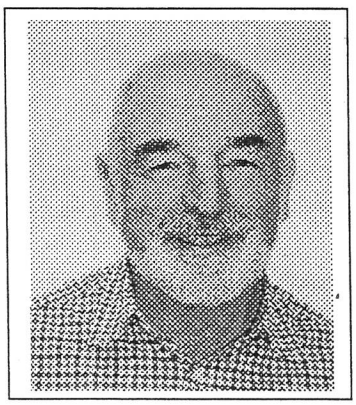


Nic Bilham is Data Manager at the Geological Society, where he has worked since 1997. He graduated in History and Philosophy of Science from Cambridge in 1993, and it was his continuing interest in the history of science which initially drew him to work at the Society. He is now responsible for a development of the Geological Society's website, and a number of other information delivery projects, and also works on areas such as business planning. Along with other members of the committee, Nic is currently involved in planning an oral history project, to mark the Society's bicentenary, which will get underway during 2006, and about which HOGG members will soon hear more!

Patrick Wyse-Jackson



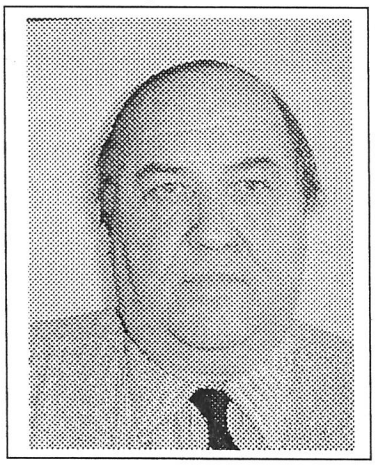
Richard 'Dick' Moody



Dick is currently Emeritus Professor of Geology at Kingston University. He joined Kingston in 1964 as Lecturer/Curator and retired in 1993, having spent the last 10 years of his career as Director of Kingston Geological Services; a major Research/Consultancy group that provided innovative services, such as chemostratigraphy, to the petroleum industry. Dick has served on Council for both The Geological Society and The Geologists' Association and was President of the Association from 1998-2000. One of his major achievements during his term of office, was the organisation of Earth Alert, held in Brighton in 2000. Earth Alert II held in Scarborough in 2002 attracted around 8,000 visitors. Trained as a palaeontologist/sedimentologist, Dick

has written numerous books on fossils, evolution and Earth History. He is interested in all aspects of Historical Geology and is keen to help with the planning and organisation of meetings that will promote the aims and ideals of HOGG. He is currently active in fundraising for the redevelopment of the Rotunda Museum in Scarborough and as consultant to the petroleum industry.

Patrick Boylan



Patrick Boylan read geography and geology at Hull University, and specialised in history of science in his postgraduate certificate, with a dissertation on James Hutton. His part-time PhD (Leicester 1984) was on William Buckland. After four years in the Hull Museums (1964-68) he directed the city and county museums and arts services in Exeter, Leicester and Leicestershire (1968-90). In 1990 he became Professor and Head of the Department of Arts Policy and Management at City University London, responsible for a range of policy and management courses covering museums, heritage and the arts and related PhD research. In December 2003 he retired but remains with City University as Professor Emeritus in Heritage Policy and Management. His elected positions within the Museums Association included two years Centenary President, while internationally he was Vice-President of the UNESCO-based International Council of Museums for six years. His scientific publications and continuing research range over quaternary geology and vertebrate palaeontology, 19th century geological controversies, and related biographical work, particularly on William Buckland and his circle.

Have you got an e-mail address?

Does HOGG know?

If you have an e-mail address, you will be able to take advantage of HOGG's entry into the Age of Information Technology – but please let HOGG know.

If you think that HOGG does not have a record of your e-mail address, please contact the Secretary, Anne O'Connor (hogg@geolsoc.org.uk), and your details will be updated.

Future HOGG meetings...

HOGG Open Meeting

Thursday 13th April 2006, at Burlington House, Piccadilly, London

(for registration, please complete the separate enclosed form)

PROGRAMME

9.10 – 9.30 Registration

9.30 – 10.00 John Mather '*Erasmus Darwin and the principle of the overflowing well*'

10.00 – 10.30 John Morton '*William Smith, Sussex and the Ouse Navigation*'

13.00 – 11.00 Coffee

11.00 – 12.00 **Keynote Address by Professor Leonard Wilson** '*19th Century Debates on Geological Uniformity and the Age of the Earth*'

[Professor Leonard Wilson is an emeritus professor of the University of Minnesota, U.S.A. For over 35 years he has been researching the life and times, ideas and writings of Charles Lyell, and is, probably, the world authority on this giant figure in the History of Geology. He is the author of many excellent publications on Charles Lyell, including 2 parts of a well-received biographical trilogy: Charles Lyell, The Years to 1841: The Revolution in Geology (Yale U.P., 1972), and Lyell in America: Transatlantic Geology 1841–1853 (John Hopkins U. P., 1998). He also contributed to the celebratory volume on Lyell published by The Geological Society, 1998.]

12.00 – 12.30 Gordon Judge '*The poetry of geology: a stratigraphic approach*'

12.30 – 1.30 Lunch

1.30 – 2.00 Melanie Keene '*Gideon Mantell's 'Thoughts on a Pebble''*

2.00 – 2.30 Peter Tandy '*In Pursuit of Mantell's Quarry*'

2.30 – 3.30 Nic Bilham, etc '*The Geological Society Oral History Project*'

3.30 – 4.00 Tea

4.00 – 4.30 Chris Duffin '*William Buckland and his Coprolites*'

4.30 – 5.00 Anthony Brook '*Victorian Geologists and Suicide*'

5.00 – 5.30 Cynthia Burek '*Two Scottish Women from Aberdeen*'

5.30 – 6.00 John Smallwood *'The Schiehallion 1774 Experiment revisited'*

Further details from Anthony Brook, whose email address is <anthony.brook2@btinternet.com>

William Buckland 150th anniversary symposium

Oxford University Museum of Natural History, 12 August 2006

The Oxford University Museum of Natural History, the History of Geology Group (HOGG) and the Palaeontological Association are meeting together on Saturday 12th August 2006 for a day of talks on the charismatic geologist William Buckland (1784-1856). This month will be 150th anniversary of Buckland's death. The Museum is also mounting an exhibition of his specimens at the Museum.

Preliminary Programme
(the order of speakers may change)

- 10.30 Coffee, followed by a series of 30-minute presentations, as below:
- Jim Kennedy (Oxford): Introduction. *William Buckland, Biographical Outlines*
- John Brooke (Oxford). *"On Grand, Original Design". Buckland and his Palaeo-theology*
- Hugh Torrens (Keele) *William Buckland and the transmission of British stratigraphic knowledge*
- Martin Rudwick (San Diego / Cambridge). *Buckland, Agassiz and Glacial Theory*
- Philip Powell (Oxford). *New Light on the History of "Megalosaurus"; the Great Lizard of Stonesfield*
- Simon Knell (Leicester). *William Buckland and Museum as Network Hub*
- Jonathan Topham (Leeds). *As much a Newspaper Subject as an Horrid Murder. William Buckland's Bridgewater Treatise*
- Ralph O'Connor (Aberdeen). *Journey to the Centre of the Earth: William Buckland and Geological Storytelling.*
- Phillip Taquet (Paris): *Buckland and Cuvier*
- Claudia Schweizer (Vienna): *Pioneers of Palaeobotany: Buckland, Brongniart, Sternberg, and their relations with Schlotheim*
- Patrick Boylan (Leicester): *William Buckland and the early institutionalisation of geology: the Oxford Readership, Geological Society and British Association.*

For further details, please contact Professor Jim Kennedy
Address: University Museum of Natural History, Oxford
Email: jim.kennedy@university-museum.oxford.ac.uk

HOGG Diary of Future Meetings

The HOGG Committee has set an ambitious provisional agenda of meetings for the future. More details will be given of each meeting nearer the date, but so far the provisional diary is:

2006
HOGG 'Open Meeting' (13 April)
Field trip to Scotland (Spring)
History of Geoconservation (24-25th November) (in conjunction with the Black Country Geol.Soc.in Dudley)
A 'Buckland' meeting in Oxford (Saturday 12th August)
2007
Mapping Literary Geology (March)
Celebration of the bi-centenary of the Geological Society (12-13th November)
2008
History of Igneous Petrology
Field trip to Liverpool (in conjunction with the Geologists' Association ?)
History of Micropalaeontology
History of Metallurgical Mining (possibly held in Cornwall)

Other topics may include:
History of the Philosophy of Geology, the History of Mineralogy, something on Collections Lost and Found, and more on Hydrogeology

If members have any additional ideas for meetings (or field excursions) the Committee would be pleased to hear of them.

The Previous HOGG meeting...

"The Role of Women in the History of Geology"

In a slight change to the published programme, this meeting started with **Dr Nina Morgan** speaking about Anne Philips, sister of the more famous John Phillips. Both were orphaned at an early age, and were taken in by their uncle, William Smith - the "father of English geology". It was he who arranged for John to be educated and introduced him to geology. Perhaps he did the same for Anne, but little is known of her life at this time, but preserved letters show she was well educated. She was able not only to provide John with geological assistance, but also acted as housekeeper to him for 33 years until her death in 1862. And it was she who accompanied brother John on an expedition to the Malvern Hills in 1842, which was to change ideas about the intrusive origins of the area. These ideas were held by Roderick Murchison, but strongly disputed by John Phillips. It all depended on whether there was a basal conglomerate to the sequence, and it was Miss Phillips who went out and found it.Details were published in 1842, and Anne was given full credit. It subsequently became known as "Miss Phillips' Conglomerate" - and today is collected by all field trips to the area!

Following this, **Dr Mary Orr** looked at the career of Sophie Dauvaucel, the step-daughter of Georges Cuvier. Cuvier took great pride in encouraging Sophie, and she was well

educated, at a time when women had the same rights as children and the insane! She was 14 when her mother met and married Cuvier. At the time he was Director of the Jardin des Plantes in Paris, and they moved to a house within its walls. Sophie's education included music and drawing, and she was a fine draftswoman. She was also able to converse with her father and visiting scientists after dinner - almost unprecedented for a woman at that time.

Prof. John Mather spoke about Grace Anne Milne, also known for a while as Lady Prestwich. The daughter of James Milne and Louisa Falconer, she was also the niece of Hugh Falconer, the botanist and palaeontologist. At 22 she married George McCall but it was short lived as he died only 18 months later. She also lost an infant son in this time, and depression set in. It was her uncle who rekindled an interest in geology. On several occasions he went to India where he achieved much (including being the first person to cultivate tea), and she accompanied him. But ill health made him return, and he died in 1865. Grace acted as his secretary and housekeeper, and he shared scientific ideas with her. Five years after his death, Grace married Joseph Prestwich, a London wine merchant and friend of Falconer's, who was a keen 'geologiser'. Together they lived near Sevenoaks (Kent) until in 1874 he became Professor of Geology at Oxford, and they spent parts of the year there. He encouraged her to write novels ("The Harbour Bar"- 1874; and "Enya" - 1881 were two), travel articles and scientific papers, as well as helping him with his lecture preparation. Most of her articles were intended for prosperous middle classes, and were published in magazines such as *Leisure Hour* and *Every Girls Magazine*. Grace died in 1899, and her obituary in the Proc. Geol. Soc, referred to her as "never enrolled among the Fellows, prevented from doing so indeed, by sex alone".

Dr Tony Brook used the novel *Wives and Daughters* by Elisabeth Gaskell (1862) as his historical template for looking at such female relatives of 3 pioneer Sussex geologists. In the early years of their marriage, Mary Ann Mantell was an enthusiastic field assistant to Gideon, and engraved many of the illustrations for his *Fossils of the South Downs* (1822), including the Frontispiece, which is dated 1818, the year she gave birth to their eldest surviving child. Maria, wife of Frederick Dixon, was a fine draughtswoman and water-colourist, and contributed 3 colour Plates to his magnum opus. In the case of George Bax Holmes, of Horsham, it was Gulielma, his eldest daughter, who assisted him in the field, produced illustrations of his dinosaurian discoveries, and later ensured that his fossil collection was sold intact to the Booth Museum. Female relatives such as these contributed in many ways to their geologically-minded menfolk in the 19th century, and should be generally considered as 'Auxiliaries'. They constituted Geology's 'Auxiliary Legions', as per the Roman Army.

Prof Cynthis Burek & Dr Jacqueline Malpas, looked at the work of Ethel Woods (nee Skeat) and Margaret Crossfield in NE Wales. Detective work by the two authors, interspersed with a certain amount of luck, enabled them to link fossils of graptolites in shales found in a museum in North Wales, to maps found in a library in Cambridge. The result was the discovery of formerly lost material collected by Woods and Crossfield, and its significance as a record of deposits which could be traced on the maps.

Doretha Bate was the subject for **Karolyn Shindler.** Dorothea was born in 1878, and her palaeontological knowledge was entirely self-taught; she was not related to any geologist. Her father was in the army, then the police and there is nothing in her unbringing to point to her future success as a natural historian. It was just instinctive. The family moved to Newcastle Emlyn when she was 10 and her instincts took over. She collected insects, fossils, stones, birds, mammals, etc. With encouragement from her father she learnt to shoot fish, and engage in taxidermy. In 1898 she marched into the Natural History Museum in London and demanded a job. Taken to the 'bird room', she was told to go away. But she persisted and became the first woman to work as a scientist at the NHM. When the family moved to near Symonds Yat, she found caves previously unknown, which coal miners showed to her. She had no trouble in negotiating their often difficult terrains (one cave in particular is reached after a climb of 150' followed by a 15' ladder - even today with adequate clothing it is difficult !). She also became the first palaeontologist to explore the caves of Cyprus. In the Balearics she discovered a new species of antelope/goat. This was at a time when Travel to the Mediterranean was difficult with no tourist industry; even Cyprus under British rule had no

deep water harbour, and Crete had just 12 miles of roads!. In Cyprus she contracted malaria but insisted on working, but she died in 1952 after a long illness.

Dr Susan Turner had come all the way from Australia to look at the contribution of women to palaeontology there. Some of these were émigrés, but many were 'home-grown'. The 19th century craze for all things natural spurred women on to become illustrators of fossils, or to join university courses, where at times they even outnumbered men. But to achieve this they relied on (usually male) mentors and family, and gaining academic status meant foregoing marriage and children. Jobs were scarce until post WW2, but even then the Marriage Rule precluded many from taking appointments until post 1968. Among those who did manage to make a name or career for themselves were Dr Ida Brown (1900-1975) (who became Ida Browne upon marriage), who worked at the University of Sydney as a petrologist and palaeontologist, but had to give up the job when she got married. Also, Isabel Coulson (1893-1973), who became a pioneer in palynology, but failed eventually to get on with Prof. Turner, and Joan Crawford (nee Beattie), a palaeontologist at the University of Sydney who was the first Australian expert on fossil bryozoa. Dr Mary Wade (1928-2005) was a great researcher on pre-Cambrian fossils, as well as a dinosaur hunter, nautiloid specialist, and researcher on ichthyosaurs & plesiosaurs. She failed to get a permanent lecturer's job and moved eventually to the University of Queensland. A better fate befell Dorothy Hill (1907-1997) who did succeed, and became an FRS, but was never made a head of a department.

The role of women in Irish geology was examined by **Dr Patrick Wyse-Jackson & Dr Bettie Higgs.** From the early 1700s to the 1900s, women were not allowed to go to University, were not allowed to publish their own names on work done, and had to give up any job upon marriage. They were though excellent recorders with regards to travel or art, and botany was pronounced (by men!) as 'suitable' for women. Women carried out supporting roles research assistants, curators, cartographers, illustrators and tutors) , but not academic ones (academic roles tended to be in astronomy, microscopy & X-ray crystallography). In the late 1600s William Molyneaux founded the Dublin Society for Improving Knowledge, Mathematics and Mechanics. One early pioneer was Susannah Drury. She went in 1740 to the Giant's Causeway in Antrim for 3 months, to record the feature (it was only marked on maps from 1714). The work she produced was of excellent quality, and she was given £25 for it. The paintings were engraved by a French artist, and eventually were distributed around Europe. The structure was later recognised as being the same as that in the Auvergne. Another was Mary Rosse, who was born Mary Field in Yorkshire. She married William Parsons (3rd Earl Rosse) and they lived at Birr Castle, Co.Offaly. Parsons is better remembered for his work on developing the steam turbine, but he also built the world's (then) largest telescope in the castle grounds. Mary was an avid collector of fossils, and also bought minerals from Tennant in London.

Florence Bascom (1862-1945) was the subject for **Dr Renee Clary & Dr James Wandersee.** Bascom's career started after she gained a bachelor's degree in science in 1884. At the Universityy of Wisconsin, under Roland Irving, a petrologist and microscopist, she gained a master's degree in geology in 1887, focussing on petrology and microscopy. She did this despite not being allowed to make any field trips! In 1891 she went to John Hopkins University for a doctorial study on volcanic rocks of South Mountain (Maryland). Here she was allowed to do field work! It resulted in a Ph.D in 1893, & Bascom was the first woman at JHU to achieve the honour, and only the second in the whole of the USA. She was then employed by Edward Orton, a family friend, at Ohio State University, but left after 2 years to go to Bryn Mawr college (Pennsylvania), where in 1895 she founded the geology department. In 1906 she was appointed a full professor, and in 1906-07, she travelled to Germany to study crystallography under Victor Goldschmidt. The geology department at Bryn Mawr gained no respect and she was forced to work through the Geological Society of America, and the US Geological Survey. She became the first woman to present a paper before the GSA, and served on the Council from 1925-1927; she was also the second woman Fellow of the GSA. Later she became the first woman to be employed by the USGS, but still attempted to conceal her gender by signing herself simply "F.Bascom"

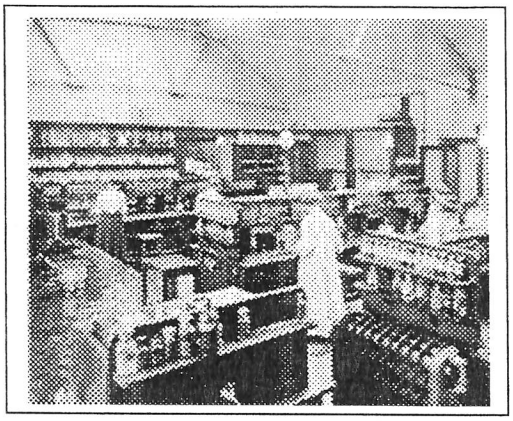
Dr Martina Kolbl-Ebert focussed on the role of women in early 19th century palaeontology and contrasted those in Germany with those in Britain. 1800 marks the rough beginning of geological research, and the professional nature largely precluded the activity of women, but in Britain, a non-professional culture of science allowed participation. They were not seen as opponents in the competition for jobs, and it extended to wives, daughters, sisters and even non-related females. In Germany the influence of women was negligible. Germany was a land divided into many small states, of which Saxony with its rich silver mines was the most important. The Revolution in France and other wars altered the political landscape of Germany; German families became more private with men going out to work and the women staying at home. It also ushered in new fashions for women, which allowed much greater movement. Geology took place in universities and museums which were closed to women at that time. Just a few German women with connections were dealers, but the connections were not like those enjoyed by Mary Anning in Britain. The Industrial Revolution started much earlier in Britain, and it required coal and iron. In the early nineteenth century in Britain, geology was popular with non-professionals and was spoken about at dinner parties. It all aided the development of women's geology in Britain, but retarded it in Germany.

Following this, **Howard Falcon-Lang** looked at the career of Marie Stopes and her work on the "fern ledges" The Fern Ledges, on the Bay of Fundy, Newfoundloand, which form a sequence of dipping strata, had been looked at by Gesner, Hartt and William Dawson, who all found a vast array of plants & insects (some of which showed the capability of stridulating - as crickets do to make a noise). Controversy broke out about 50 years after Dawson looked at the deposit. Some thought the deposit to be Carboniferous, others Devonian, but George F.Matthew thought it to be Silurian. The Geological Survey of Canada recruited Marie Stopes who was the rising star of the time in palaeobotany to resolve the dispute. Marie saw the importance of a photographic record of finds, and more importantly perhaps, made no attempt to extrapolate from them where there was no evidence. She avoided interpretation and made sure any data was free of it. Marie made her studies en- route from Japan in 1911, and published a monograph on it in 1914. It confirmed a Carboniferous age, but additionally showed the area to have been dry at the time, and not the 'usual' swampy conditions imagined. Marie also had another side, for while writing the monograph, which still remains the standard wok on the subject, she was also working on the first sex manual, which she completed in 1913. It was published as "Married Love" in 1918.

Dr Jane K. Hart summarised the work of a number of women who have played a role in Quaternary geology, and looked at how the statistics have changed over the years for their academic advancement. Among those who advanced the subject in the 19th century might be mentioned Mary Somerville (1780-1872) who wrote a book on physical geography, Dorothea Bate (1878-1951) Mary Caroline Hughes (1862-1916) who worked on mollusca and the county geography books covering Cambridegshire. In the 20th century there was Marjorie Sweeting (1920-1994) who had many publications including some on Kent landforms, Jean Mary Clark (1927-2001) who wrote a book Little Ice Ages, Mary leakey whose fame in palaeo-archaeology is now legendary and Suzanne Lawley (1924-1993), an Australian who studied in Cambridge then went to work on the palaeoecology of Australia. The statistics show that while the situation in Universities is getting better for women it is still less advantageous than for men.

Prof. Cynthia Burek looked at women as geological educators and role models in higher education, with examples from Bedford and Newnham Colleges. In 1864 Cambridge opened its examinations to women but left it to the Professors whether they marked the papers or not! Not until 1878 were University of London degrees opened to women, and they had to wait

until 1919 to join the Geological Society. Two years later Cambridge started awarding degrees to women. Although Bedford College started in 1849 to save the upper middle classes from the "dreary futility of life", geology was only taught from 1885, and there were no laboratories until 1897. Women were often confined to rooms to study and needed a chaperone. It remained an independent college for 136 years. The first full time Head of Geology was Catherine Raisin (who also headed Botany), one of just 2 female heads of Departments. Raisin became Vice President of the Geological Society (1891-94) and in 1890 President of the Debating Society.



Laboratory at Bedford College

In college she had no instruments to work with, but by 1898 had amassed a collection of over 1100 fossils, and several hundred minerals, and had established a new laboratory. In 1916 She offered £50 per annum from her own pocket, to fund a geology teacher, and paid the wages of assistants.

The role of women in the Geologists' Association was the theme for **Susan Brown.** Rule III of 1858, when the GA was formed, stated that "Ladies shall be eligible for election as members of the Association", so they were there from the start. But they didn't fare too well. Of 74 presidents since its inception, just2 have been women, and of 25 General Secretaries, 3 have been women. The first president was Muriel Arber, in 1972, some 114 years after the GA was formed. The second was Susan herself, 28 years later. But if they didn't hold Committee posts, they were active among the membership. One of the most active was Miss M.S.Johnston who led a field trip to St David's Exeter. She was privately educated and joined the GA in 1875. She became the first Secretary of the Illustrations Committee in 1920. Another important member was Catherine Raisin, who became the first GA Council member and as the most senior member when she died. It should also be noted that the logo of the GA was designed by a woman!

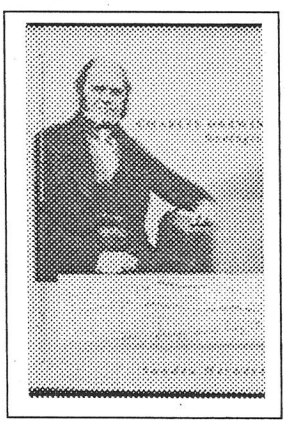
Eric Robinson ended the formal lectures with a look at Muriel Agnes Arber (1913-2004). She was the daughter of palaeobotanist (and later geomorphologist) Edward Newell Arber, and the botanist and Fellow of the Royal Society, Agnes Arber. Born in 1913 in Cambridge, she resided there all her life (save for 2 years education in Kent), but it was with Lyme Regis that she is always remembered. Despite shortages of money, her parents managed modest holidays either to north Devon, or to Lyme, and for Muriel and her mother, the latter entranced them. She was fascinated by the fossils found along the coast, but from 1940 turned to studies of the landslips. Her painstaking studies, with numerous photos, gave a vital record of the movements. She was educated at Newnham College, Cambridge, initially intending to study the Arts, but was converted to geology after meeting people such as Gertrude Elles and Mary Wood (of graptolite fame), Alfred Harker (petrology), & F.R.Cowper Read (palaeontology). She researched strophomenid brachipods under Professor O.M.B.Bulman, at the Sedgwick museum, but associations with the Sedgwick ended due to WWII. She became a teacher at King's School, Ely and started an association with the GA, but never lost her Cambridge 'roots'. Within the GA she was effective when it went through periods of uncertainty in the 1970s, helping to produce a Code for Geological Fieldwork. Her greatest reward came when she was elected president (1972-1974), and when she was awarded the

Foulerton Award (1983). To these honours she was voted, at the age of 90, Lyme's oldest tourist! She died in 2004.

So ended a memorable meeting attended by about 80 people, with about 35 going afterwards for an arranged dinner.

For your Bookshelf?.....

"Charles Darwin - Geologist", by Sandra Herbert, Pub: Cornell University Press, (2005) 212 pages, ISBN 0-8014-4348-2



"Pleasure of imagination. . . . I a geologist have ill defined notion of land covered with ocean, former animals, slow force cracking surface &c truly poetical."—from Charles Darwin's Notebook M, 1838

The early nineteenth century was a golden age for the study of geology. New discoveries in the field were greeted with the same enthusiasm reserved today for advances in the biomedical sciences. In her long-awaited account of Charles Darwin's intellectual development, Sandra Herbert focuses on his geological training, research, and thought, asking both how geology influenced Darwin and how Darwin influenced the science. Elegantly written, extensively illustrated, and informed by the author's prodigious research in Darwin's papers and in the nineteenth-century history of earth sciences, Charles Darwin, Geologist provides a fresh perspective on the life and accomplishments of this exemplary thinker.

As Herbert reveals, Darwin's great ambition as a young scientist—one he only partially realized—was to create a "simple" geology based on movements of the earth's crust. (Only one part of his scheme has survived in close to the form in which he imagined it: a theory explaining the structure and distribution of coral reefs.) Darwin collected geological specimens and took extensive notes on geology during all of his travels. His grand adventure as a geologist took place during the circumnavigation of the earth by H.M.S. Beagle (1831–1836)—the same voyage that informed his magnum opus, On the Origin of Species.

Upon his return to England it was his geological findings that first excited scientific and public opinion. Geologists, including Darwin's former teachers, proved a receptive audience, the British government sponsored publication of his research, and the general public welcomed his discoveries about the earth's crust. Because of ill health, Darwin's years as a geological traveller ended much too soon: his last major geological fieldwork took place in Wales when he was only thirty-three. However, the experience had been transformative: the methods and hypotheses of Victorian-era geology, Herbert suggests, profoundly shaped Darwin's mind and his scientific methods as he worked toward a full-blown understanding of evolution and natural selection.

Professor Richard Howarth - An Apology

The Editor would like to offer unreserved apologies to Professor Richard Howarth, University College, London, regarding an article in the previous HOGG newsletter, which cast doubt on his integrity and capability. No such slight was intended, and while the Editor believes that the article asked a valid question, he realises that it was wrong not to offer the chance for Professor Howarth to have a right of reply in advance of publication. Professor Howarth offers a reply below.

Dear Sir

Re: 'H. of G. in the P.G.A.' by Anthony Brook, *HOGG Newsletter* no. 25 (September 2005), pp. 13-15

It was with considerable surprise that I read Anthony Brook's criticism of my Editorial published in the *Proceedings of the Geologists' Association* [*PGA*] **116** (1), 1-4 (2005) in which he insinuates that my analysis of the *PGA* article contents from 1950 to 2004 was flawed ('inflated figures'; 'it would be awfully nice to believe that Historians of Geology were as productive as these figures purported'; 'if these figures are to be believed'; 'these data seem aberrant' *etc.*, his p. 15).

If, before sending his article for publication in the *HOGG Newsletter*, Brook had had the courtesy to write to me first concerning his doubts regarding the results of my analysis, I could have reiterated exactly how the percentages in Table 1 in my editorial were arrived at. This was explained, I had thought sufficiently clearly, in the paragraph at the top right of page 1 of my Editorial: 'Table 1 gives the relative proportions of subject matter of all articles published per decade since 1950 plus the issues for 2000-2004. Significant topics in each paper have been counted, meaning that the subject matter of a given technical article could appear in several categories. The counts across all categories have then been totalled and converted to percentages of the total count per decade or five years (2000-2004).'

It should thus have been obvious that since one article could contribute to several subject categories, the total count, taken across all topics, would always be greater than the total number of articles published. For brevity, the raw count data were not given in my Editorial and *cannot* be derived from the figures given for 'Technical articles per decade' in the way Brook attempted to do and which appears to have formed the basis for his comments. I included figures for 'Technical articles per decade' in the Table simply to illustrate the fact that the total number of such articles published in the *PGA* had remained relatively constant (a fact which surprised me as the earlier issues were often much thicker than in recent years, a reflection of rising cost of publication governing total pages per issue). I used the term 'Technical articles per decade' because obituaries, book and essay reviews, visit reports, etc. also appear as categories in my Table 1. I had assumed it was obvious that the figure of 'c. 350' Technical articles per decade for the period 2000-2004 was simply an estimate, since we are only part-way through the decade. In my analysis, I made absolutely no attempt to predict anything about the future number of papers on any topic, nor did I imply that I had attempted to do so.

The actual raw data for 'History of geology' and overall category counts were as follows:

	1950/9	1960/9	1970/9	1980/9	1990/9	2000/04
H. of G.	5	6	6	19	22	23
Total counts	369	329	335	390	404	238
%	1.4	1.8	1.8	4.9	5.4	9.7

and these percentages are the ones which appeared in Table 1 in my Editorial.

I do not dispute that some subjectivity must inevitably arise in categorising article contents. I was attempting to do so from the point of view of potential readers – an article could still be of interest to an historian of geology, sedimentologist, geomorphologist, *etc.*, even if it was originally written for a different audience. I did not differentiate in any way, when assigning articles to relevant categories, between the nature of the categories and although it is true that I have a personal interest in the history of geology, this did not influence the basis on which I made the assignments; recall that one article could be relevant to several subject areas. With regard to recent issues of the *PGA*, despite the fact that since 2000, it has contained several papers in connection with the HOGG/Geologists' Association joint meeting on the role of the Amateur in Geology (and there is a final group yet to come), as editor, I am also aware that the number of *ad hoc* papers on, or relevant to, history of geology submitted to the *PGA* has also increased in recent years. I would thus strongly contest Brook's conclusion that my data 'seem aberrant: they paint far too rosy a past, and future for the History of geology, at least as far as this mainstream geological publication [i.e. the *PGA*] is concerned.'

I believe that Brook's paper could be read as calling into question both my integrity as a journal editor and my competence as a data analyst. Had such an article been submitted to me, as editor of the *PGA*, its tone would certainly have put it into the 'liable to cause offence' category and I would have automatically returned it to the writer and/or sent it to the author of the original article for comment or reply *prior* to publication, as appropriate. I believe that in this case, your editorial standards have fallen short of what should be expected.

Since my career in academia (Reader in Mathematical Geology, Imperial College London, 1978-85; Visiting Professor, 1993-2001, and Honorary Professor in Mathematical Geology, University College London, 2001-present; William Christian Krumbein Medal of the International Association for Mathematical Geology, 2000) and industry has been founded on the analysis of geological data, my reputation in this field is important and I feel that a retraction and apology by Brook, and an apology from yourself are called for.

Yours sincerely
Richard J. Howarth
Hon. Editor, *Proceedings of the Geologists' Association*

Comment from Tony Brook:
"I am very sorry that Professor Howarth felt so affronted by my piece in the previous issue of the HOGG Newsletter. I can reassure him that there was no malign intent at all, and I should tender my apologies on two counts: first, it was absolutely not meant to be an assault on his intellectual prowess, academic integrity or professional credentials: and, second, my language and choice of words was, perhaps, too forthright for the occasion, which can be put down to a defect of my character. I was merely trying to point out that History of Geology was not, and never has been, as strong a contributor to the P.G.A. as would seem to be the case at first sight. I probably overstated the case, in purple prose, to make the point, but stand by my personal views in this matter. Sorry, Professor Howarth, for any perceived offence: none was intended".

Science Museum Library saved

It has been announced that the future of the Science Museum History of Science & Technology holdings at South Kensington has now been secured.

The main elements of the proposal are as follows:
* The Science Museum Library's important and frequently used Science and Technology Studies collection (STS) will remain within the Central Library at Imperial College's campus in South Kensington
* Imperial College plans to redevelop a large part of the existing library building to provide modern, upgraded student study facilities with improved access to digital library materials
* The less frequently used parts of the Science Museum Library's collections, including some periodicals held jointly with Imperial's Central Library, will move to a newly created library repository at the Science Museum's site in Wroughton, near Swindon, Wiltshire
* All printed materials stored in Wroughton will be made available to users in the Central Library within one working day using a modern document delivery system
* There will also be a separate consultation room within the Science Museum where researchers can consult specialist Science Museum archives and library material
* All three locations will be electronically connected to ensure efficient management of document requests and cataloguing
* Implementation is scheduled to start in January 2006 and is likely to take around two years to complete.

* Full details can be found at www.sciencemuseum.org.uk/libraryfuture. Here you will find background information, together with Q&As on implications for library users. The museum is inviting all library users to provide their feedback on the best way to implement the new agreement. The website will be kept updated as the implementation progresses so keep visiting it for further information.

[Editor's note: The following is a message from staff at the library]
"Staff, whilst disappointed that the library collections will not be kept together, are pleased that the STS collection will be accessible in South Kensington. Through their trade union, "*Prospect*", they will be discussing the details of the proposals with museum management and will shortly issue a letter to interested parties outlining their considered response. If you would like to receive a copy of this letter and are not already on the Prospect contact list, please send your details to John Underwood, Prospect Rep for the Science Museum Library at the Science Museum Library, London SW7 5NH; Email: john.underwood@nmsi.ac.uk."

Charles Dawson: Fossil Collector

Anthony Brook

Recently I produced and published a revised edition of 'Sussex Fossil Collectors: A Preliminary List', which had been laboriously constructed by extracting all the relevant entries from R. J. Cleevely's *World Palaeontological Collections* (1983). One of those entries reads: 'Dawson, T., F.G.S. lived at St Leonards. BM (NH) purchased collection of Wealden Reptilia in 1884, and acquired other material 1885–94'. Like quite a few others, this person remained a mystery. He (or just possibly she) was just another of the many enthusiasts, of uncertain time and place, who had collected fossils from Sussex strata over the years. . . . .until, that is, I suddenly realised who it was meant to be.

During the spring months I spent some time reading Miles Russell's latest book *Piltdown Man: The Secret Life of Charles Dawson and the World's Greatest Archaeological Hoax* (Tempus Publishing, 2003). Very soon I came across the following well-referenced paragraphs (13–14):

> 'From his earliest days Charles Dawson possessed a keen interest in the natural world, collecting a variety of fossils from the coast, cliffs and quarries around Hastings. In much of these searches he was encouraged by Samuel Beckles, F.R.S., a distinguished geologist then in his twilight years. Together with Beckles, Dawson amassed a considerable collection of reptilian and mammalian fossils, the prize piece being the 'finest extant example' of the ganoid fish *Lepitodus mantelli*, all of which he donated to the British Museum in 1884. The Museum conferred upon him the title 'honorary collector', and in 1885, in recognition of his many discoveries, he was elected a Fellow of The Geological Society, quite an achievement for a man who was still only then aged 21.
>
> He continued to add fossil discoveries to the British Museum's Dawson Collection throughout the late 1880's, 1890's and early 1900's. Amongst the material were 3 new species of dinosaur, one of which was named *Iguanodon dawsoni* by the palaeontologist, Richard Lydekker. Later discoveries included the finding, in 1891, of teeth from a previously-unknown species of Wealden mammal, later named *Plagiaulax dawsoni*. Dawson periodically continued his fossil-hunting activities under 1911. . . . . discovering more unique remains, including a new species of mammal named *Dipriodon valdensis*, and 2 new forms of fossil plant, *Lycopidites teilhardi* and *Salaginella dawsoni*.

For emphasis Miles Russell called the second chapter of his examination of Dawson's dubious activities Monsters in the Weald, for good reason, and begins by reiterating Dawson's palaeontological credentials. Eventually loud bells began clanging in my head, and I made the connection: <u>that</u> is the Dawson in Cleevely's list! Confirmation is provided in several other ways:

1) In February 1955 Joseph Weiner published his iconoclastic account of 'the most famous and successful hoax in science', entitled *The Piltdown Forgery*, in which he pointed the finger of suspicion firmly and squarely at Charles Dawson. It was reissued as a 50th anniversary edition in 2003, with a new introduction and afterword by Chris Stringer of the Natural History Museum. Weiner wrote (74–75) in a very similar vein about Dawson's preliminary palaeontological propensity, which resulted in the Dawson Collection at the British Museum, and F.G.S. for an ambitious young man without a University degree from the provinces.

2) Frank Spencer published a masterful survey of the whole Piltdown affair in 1990 entitled *Piltdown: A Scientific Forgery*. He has a short section on Dawson's early career (152), and was of the opinion that what motivated Dawson was 'an unremitting passion he had nurtured since childhood for palaeontology and geology'. In the same paragraph, Spencer continued: 'It had been under [Samuel] Beckles' critical and watchful eye that the young Dawson had assembled and catalogued a sizeable and valuable collection of fossil reptiles which was eventually, in 1884, donated to the British Museum (Natural History)'. The next paragraph begins: 'Between this time and the years immediately preceding the events at Piltdown, Dawson continued to add specimens to his cabinet at the Museum'. Frank Spencer also

contributed the entry on Charles Dawson to the Oxford Dictionary of National Biography (2004, Vol. 15, 1550–51) and succinctly says much the same thing.

3) Final confirmation (if any were now needed) was provided by an email I received back from the Earth Sciences Library at the National History Museum on 22 April confirming that the British Museum (Natural History) had indeed purchased part of the Dawson Collection in 1884.

There is, therefore, no doubt at all that this entry in Cleevely's *World Palaeontological Collections* is meant to refer to Charles Dawson, of Piltdown Man notoriety. All but one of the details fit exactly, and it should read: 'Dawson, J. Charles 1864–1916 F.G.S. Lived at St Leonards and Uckfield, East Sussex. British Museum (Natural History) purchased collection of Wealden Reptilia in 1884, and acquired other specimens, 1885–1905'. Another Sussex fossil-collector resolved.

Just one small anxiety. Was the Dawson Collection donated to the British Museum, or was it purchased by the Museum? Sources differ. Or was it 'part-purchase, part-donation', as the National History Museum's comment would infer? A loose end of minor consequence, because, either way, it was Charles Dawson what done it!

Anyone fancy a walk?...

Hogg Committee member Tony Brook will be making 3 planned long distance walks in 2006, and is looking for companions, if anyone is interested.

Walk !: South Downs Way, in the Spring (May), covering 115 miles in 8 days
Walk 2: Pembroke Coast Path, in High Summer (June/July), covering 114 miles in 10 days
Walk 3: Tour of Mt Blanc, late Summer (July/August) (Air from Gatwick to Geneva; train from Geneva to Chamonix)

Accommodation will be in B&Bs and Youth Hostels or Refuges in the case of Mt Blanc
The deadlines for anyone wishing to join Tony are 31 January (for walk 1), 31st March (walk 2), 31st May (walk 3)

Please contact Tony Brook for more details (anthony.brook2@btinternet.com)

Richard Wilding

(1923-2006)

It is with great regret that we have to announce the death on Saturday 21st January, 2006, of Richard Wilding, aged 83, after a long illness. Richard was a founder member of HOGG and served on its committee until recently, and most recently was instrumental in editing the Geological Society volume dedicated to the History of Palaeobotany meeting which he initially suggested as a theme, and then helped to organise. He was a dedicated Committee member and the current Committee would like to send condolences to his wife Valerie, his children and grandchildren.

According to his wife: ...."Richard's discovery of geology in his late forties changed his life. It all started with his Open University degree, and I think he realised this is what he should have done from a younger age had this been possible. He was born and brought up in Dorchester, and went into banking initially, but decided to become an actor after his war time service with the Royal Tank regiment. I retired early from teaching and we had some wonderful holidays together usually in places with some geological interest as well. South Africa, Namibia, the canyon lands [and] Santorini...."

The funeral will take place at SW Middlesex Crematorium on 3rd February. Donations can be made either to Brinksworth House, a retirement home which Richard enjoyed, run by the Entertainment Artists Benevolent Fund (EABF) (cheques payable to EABF), or to Dorset County Museum (cheques payable to Dorset Natural History and Archaeological Society). Donations to be sent to T.H Sanders & Sons, 132, High St.,Whitton, Mddx TW2 7LL

NAMHO Conference

(NATIONAL ASSOCIATION OF MINING HISTORY ORGANISATIONS)

9 - 11 June 2006
Royal Pavilion
Abbey Road, Llangollen, Denbighshire

"Mining in the Landscape"

The conference theme is 'Mining in the Landscape', with the programme arranged to reflect how mines and mining sit in their surroundings. In particular, the conference will look at how differences in the type of material mined, and changing technology, have influenced the mining landscape.

The Delegate Fee is £26.00 but this will be reduced to only £22.00 if you pay before 31st March 2006

A Friday evening programme which will include talks, and a presentation of IA Recordings' new DVD /Video of Mining/ Industrial remains in the area. Trade stands will be available and clubs / delegates are encouraged to bring along their own display stands and literature

To name but a few highlights We are pleased to confirm that Chris Howe (Editor of Descent and award winning photographer) will be running a photographic workshop for both surface and underground explorers. Williamson Tunnels will do a presentation as will a delegation from Spain who provide a talk on the Linare's Mining Area. There will talks on the Zloty Stok Gold Mines in Poland where the speakers are promoting the Mining heritage and are looking to introduce themselves to Mining Historians in the UK to encourage future visits and set up links with UK and international organisations (with cheap flights to Poland available this can be a very affordable future excursion)

Further details of the event can be found on the website www.namhoconference.org.uk or by contacting Andrew Wood the bookings organiser on 0143 718668 or andrewgbwood@hotmail.com

[Editor's Note: The NAHMO website gives a full provisional programme]

A programme of visits has also been planned in the week post the conference

Mon 1 - Wrexham Area
Numbers – no restrictions
Meet - Royal Pavilion
Time – 10.30 am (finish by 4.30 pm)
A "pick & mix" surface tour of Minera Lead Mine, Bersham Colliery and Ironworks, Plas Power and Penrhos depending on interest and time available. Entrance fees for access to Council managed sites may apply. Travel to and between sites will be by car so car sharing would be convenient. A coach may be organised if the take-up makes it appropriate.

Mon 2a – Salt Extraction, Northwich
Numbers – no restrictions

Surface tour of salt extraction remains. Discussions re Northwich are still going on. If this goes ahead on the Monday, a trip to Williamson's Tunnels will be arranged for the Tuesday.

Mon 2b - Williamson's Tunnels, Liverpool

Mon 3 - Underground Trip
One of the trips from Saturday / Sunday will be re-run.

Tuesday to Friday

Surface and underground field trips will be organised to suit interest. These may include further afield in North Wales or Shropshire.

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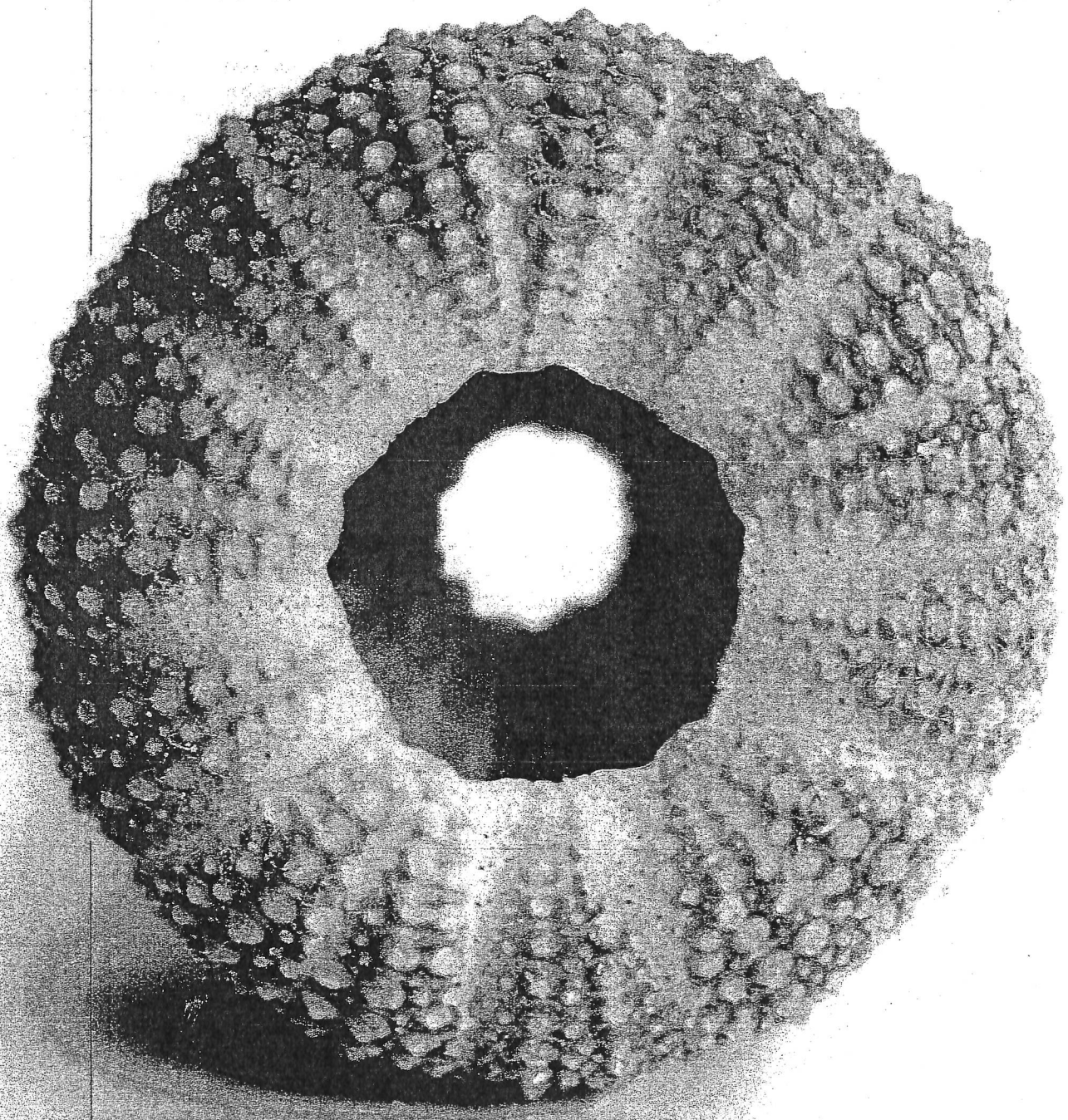

AN EXHIBITION AT

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15 October 2005 – 19 March 2006

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Brighton & Hove

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