

# GEOLOGICAL SOCIETY



## HISTORY OF GEOLOGY GROUP NEWSLETTER

No. 9

January 1999

**Editor:** Peter Tandy, Department of Mineralogy, The Natural History Museum, Cromwell Road, London, SW7 5BD (tel: 0171-938-8778; fax 0171-938-9268; e-mail [pt@nhm.ac.uk](mailto:pt@nhm.ac.uk))

---

## The next HOGG meeting

### “A History of Mineral Collecting & Collectors”

The next HOGG meeting will be on 3<sup>rd</sup> March 1999 at the Geological Society, Burlington House, Piccadilly, London, and will be held jointly with the Russell Society.

#### Programme:

- |               |                      |   |
|---------------|----------------------|---|
| 10.30am       | Assemble:            | Registration & coffee   |
| 11.00am       | Dr Robert Symes, OBE | “The Sir Arthur Russell collection – sum of the parts. A review of some early collectors and collecting”  |
| 11.40am       | Prof. Andy Rankin    | “Mountains through the microscope: the pioneering work of H.C.Sorby on the use of fluid inclusions as tools for determining the origin of rocks, minerals, & gemstones” |
| 12.20pm       | Mick Cooper          | “The restoration of the collection of Georgiana, Duchess of Devonshire (1757-1806)”   |
| 12.50- 2.00pm |                      | LUNCH – own arrangements  |
| 1.45-2.00pm   |                      | HOGG ANNUAL GENERAL MEETING (HOGG Members only)   |
| 2.00pm        | Ron Cleavelly        | “Philip Rashleigh (1729-1811): his collection, life and times”  |
| 2.30pm        | Julian Jocelyn       | “Dr Hunter’s Mineral Collection”  |
| 3.00pm        | Norman Butcher       | “The Mineralogical Books of Sir Arthur Russell of Swallowfield Park”  |
| 3.30-4.00pm   |                      | TEA   |

- 4.00pm Monica Price "The Adventures of Mary Morland's Collection"
- 4.30pm Peter Tandy " F.N.Ashcroft and his Swiss mineral collection"  
(possibly including a display of specimens and artifacts)
- 5.00pm Stuart Baldwin " Bishop Wilkins and an early mineral classification"
- Poster presentation: Richard Wilding "Henry Sowerby's Popular Mineralogy, 1850"

After the meeting wine and savouries will be available. A charge of £2 will be payable on Registration

## ...and future meetings

The meeting in the autumn of 1999 is proposed for early September and it is we are hoping to hold it at the British Geological Survey at Keyworth, Nottinghamshire. Further details will be given in the next Newsletter, but it is hoped that a tour of some of the BGS area can be arranged.

\*\*\*\*\*

### **William Smith Millennium Meeting:**

### **CELEBRATING THE AGE OF THE EARTH**

Date: 28 – 29 June 2000

**At: The Geological Society of London, Burlington House, Piccadilly,  
London**

*'The close of one century, the dawn of another, may naturally suggest some brief retrospective glance over the path along which our science has advanced and some general survey of its present position.'* William Sollas, 1900.

#### **Call for Papers**

With attention focused on the close of one Millennium and the dawn of another, what better time to celebrate the Age of the Earth? Sponsored by the Geological Society, the History of Geology Group is organising a special meeting designed to be of interest to all geoscientists. We intend to review the historical development of our science, with particular emphasis placed on geochronology and methods used to establish the Age of the Earth. Topics to be covered will range from the constraints on geological time imposed by 17<sup>th</sup> century theologians and the date of Creation; through changing perceptions about geological time in the 18<sup>th</sup> and 19<sup>th</sup> centuries, to the eventual discovery of radioactivity and the very latest methods now used to date our planet and the Universe.

The proceedings will be opened by a Keynote speaker and contributors of international repute are being invited. A subsequent thematic publication is being considered. Talks will be of 30 minutes duration and anyone interested in presenting a paper should send a title and abstract to the convenor to arrive not later than the **12<sup>th</sup> April, 1999**. As the number of talks is inevitably limited, those papers not accepted for presentation will be invited to form a poster display.

A reception and Celebration Dinner will be held on the evening of the first day. For those interested a 'Time-related' field excursion to the Wealden will be led by Professor Hugh Torrens on 30th June 2000.

**Convenor:** Dr. Cherry Lewis, HOGG, Cheese Cottage, Burton, Tarporley, Cheshire, CW6 0ER. Tel/fax: 01829 781172. Email: cleewis@aol.com

## ...and the previous meeting

On Thursday 24 September 1998, HOGG along with the Geological Curators' Group and the GeoConservation Commission, met at the Geological Society, Burlington House, Piccadilly, London, for a joint meeting entitled "Has the Past a Future". Following coffee and registration, the first session for the 35 attendees started with a talk by Phil Doughty (Ulster Museum) on Museum Geology, then and now. (Editor's note: no notes have been available regarding the content of this talk)

Following this, Steve McLean (Hancock Museum, Newcastle upon Tyne), spoke about the rescuing of the Newcastle University mineral collection at the Hancock Museum. The latter is funded by the University, but the collection is one of several belonging to the Natural History Society of Northumberland. When staff were dispersed to other institutions some collections also moved but the mineral collection was left behind and left ignored. In 1996 it was transferred on long term loan, and tied to the University lease. It had been stored, in drawers piled haphazardly in a warehouse on the university campus. Over time, humidity had made the drawers expand and the c.100 drawers containing c. 10,000 specimens were in a sorry state. The original catalogue had been lost, but there was a semblance of order still in the drawers. Computer cataloguing under the MODES system was started, but in the end about 2000 specimens were not catalogued as they were either in too sorry a state or there was no information with them at all. Local Russell Society members were enlisted to identify, and clean specimens using deionised water and some detergent, before the dry specimens were returned to clean drawers with fresh labels. Among items discovered in the 'reject' collection were a number of classic specimens from long-gone British sites, such as a Lady's Slipper from Virtuous Lady mine, Tavistock, Alstonite from Brownley Hills mine, (the type locality), Cerussite from Pentire Glaze mine, Cornwall, Liroconite from Cornwall and so on. Now much of the collection is displayed under individual fibre-optic lights.

Next was John Martin (Leicestershire Museums), who spoke on the Rutland dinosaur. This creature, a cetiosaur from the mid Jurassic, was the most complete sauropod dinosaur in the UK and possibly Europe at the time of its discovery in the early 1960s. It was found by an excavator driver in a brick pit in clay above the Lincolnshire Limestone, as the clay was being dug out to form a sump to drain the quarry. Luck played a big part in the preservation and finding. The clay area was only some 30-40m in extent, and the dinosaur could easily have been missed or destroyed. In addition the quarry, which was within 100m of the Lincolnshire county boundary, was using small-scale machinery at the time. Finally, the manager was also a member of the local geological society. The material was dug out, all 5 tons of it, and piled high, but alas without stratigraphical information. It was put on a trailer and into store. Some preparation work was done between 1965 & 1968, but this was still incomplete 33 years later! Most of the skeleton was in siderite nodules in clay. The nodules are hard but the bone delicate and soft and it was a slow process of consolidation. The quality of preserved bone is superb. About a 1/3 of the skeleton was intact, with other parts interpretable from moulds of bone. Preparation out of matrix took about 4 years. For display it was decided that a full skeleton is better, so missing portions, especially the tail which would be in the air to reflect modern thinking, was constructed in sculpted polystyrene blocks. Mounting such skeletons is usually by a wire/steel frame, but here a novel approach suspending each bone from above by wires from a steel mesh allowed orientation of neighbouring bones exactly – and as nature intended! Setting it up was an introduction to biomechanics, and it became possible to measure the exact limits of mobility of the

vertebrae. Finally there was work with Richard Neve at Manchester to reconstruct the muscles of the skull. The whole project led to great publicity and an appearance on Blue Peter!

The after-lunch session was started by Colin Prosser (English Nature), who talked about site conservation and the history of geology. In the UK we have much geological heritage, with rocks from the Pre-Cambrian to the Present seen in many exposed sites. In addition to these there are geomorphological sites as well, seen in land spits, limestone pavements etc, and there is a need to conserve these as well. Damage is by a number of agents, such as coastal erosion, unofficial development of land, land-fill, housing, and specimen collection, though the later is a lesser threat. The biggest threat is ignorance. The diversity of geology and links with history make saving sites worthwhile. In 1947 the first ideas that history of geology was important, led to the 1949 Access to Countryside Act. The Countryside Act of 1968, allowed agencies to pay landowners to manage sites better. This was followed by the nature Conservancy Council Act, 1973, the Wildlife & Countryside Act, 1981, and the Environmental Protection Act 1990, which shaped the current statutory system. Earth Science conservation is still a small part of the whole English Nature conservation, with some 1270 sites designated as SSSIs (Sites of Special Scientific Interest). Selected sites are protected through planning law; they are not preserved but conserved, and can be cleared, promoted and then enjoyed. Among sites conserved are Dundry Hill, north Somerset, linked with William Smith in the 1790s, Ludford Corner, Shropshire with the Ludlow bone bed, Valis Vale, Somerset, and Henry de la Beche's unconformity, Reed Hill, Oxfordshire, William Buckland's megalosaur site, and Cape Cornwall, famous for Cornish tin mining. But SSSIs are not the only way. There are many National Nature Reserves but so far only 2 are geological, the Swanscombe skull site, and the Wren's Nest, Dudley, famous for its Silurian fauna. Another possibility for preservation, are World heritage sites, of which the basalt columns at Staffa is one, with the Dorset coast being examined as a further possibility. More recently there has been a UNESCO initiative for 'geo-parks' linking cultural, social and industrial uses: these may give help to lesser sites. RIGS (Regionally Important Geological Sites) cover any sites identified by local groups which is deemed to be important; so far over 2000 have been identified. With RIGS and SSSIs the UK is way ahead of other countries in the preservation of these classic areas, and we have a National obligation to look after them for others. But this will only work with public support, so getting local interest is vitally important.

Next it was Chris Green (Royal Holloway College, Egham) to talk on the Curry Fund in preservation of sites & collections. Chris has been Treasurer since the inception of the fund in 1986. It made its first grants that year, and since then has made some 300, dispersing about £275,000 as small grants. Its 3 main areas of concern are support for geological publication, support for geological conservation, support for other initiatives as seen fit. Between 1991-98, £150,000 was dispersed, with 44% going to conservation projects. Local authorities now see geology as important in terms of tourism and education, and have been aided. One particular area where the Fund has been used is in the AMSSE (Area Museums of South East England) where a travelling curator funded by the Curry Fund was asked to examine & report on the condition of material held in local museums. This led to the discovery of one of Richard Owen's lost pliosaur skulls in Dorking Museum, and the conservation of the poorly preserved collection at Queen Victoria's Osborne House, Isle of Wight. A trainee conservator post was started at the Horniman Museum, London. RIGS (see above) administered by local groups especially Wildlife Trusts, are increasingly involved. The Fund supported RIGS to publish a newsletter, and has enabled the construction of databases, site records and site recognition. For example, the coal tips at Writhlington, Somerset, whose importance was seen in the mid-1980s when they were being cleared, are rich in Carboniferous flora. The Curry Fund purchased 3000 tons of waste which has subsequently revealed the largest known insect flora from the Carboniferous. The tips are extensively used for field meetings. At Rifle Butts quarry, Yorkshire, where the Red Chalk and Carstone meet the Chalk below, the Fund gave money to put a shelter up to stop the rain eroding the important face. For specimen conservation one can cite the Charmouth ichthyosaur, bought by the Bristol City Museum & Arts Gallery, but the largest single grant is one of £10,000 to the Scottish National Museum to help purchase 'Lizzie', a highly important fossil lizard, where it was necessary to match the £200,000 offer by a German Museum. This highlighted problems of the involvement of the Fund in commercialisation of geological properties. Conservation also extends to archival and monumental records. £1500 went to the Friends of Norwood Cemetary, regarding the decay of the family vault of Gideon Mantell, erected in 1840 when his daughter died. Also, £2000 went to help restore the great cross section measuring 8m x 0.5m, drawn by Murchison, and £500 to Torquay Museum to bid at auction for a letter of William Pengelly (though this eventually went for £2,600!). £1500 also allowed the Soho House

Museum to get at auction one of a pair of Mathew Boulton's fossil display cabinets – they already had the other plus his collection. But great as the Fund has been, ultimately the care of heritage does not depend on money but on a wider public perception of heritage.

David Oldroyd (Univ. Of new South Wales, Sydney) then spoke of disappearing geological evidence, here related to J.E.Marr and the Lake District. John Marr came from Morecambe (Lancashire), went to Cambridge to gain a degree, then became an external studies lecturer. His work was devoted to studying the Lake District until in about 1916 he started to go blind and stopped traveling. Marr was familiar with an 1887 map of the Shap area, and stayed at the Shap Wells Hotel while studying the area. It was well mapped but some beds shown on the map are not seen in the field. In the course of studies, Marr fell in love with the hotel landlord's daughter. They married and honeymooned at the St Pancras Hotel, London – where Marr was able to continue looking at Shap granite in the columns and lintels! Marr visited the Ashgill quarry, where the boundary between the Ashgillian and Silurian Skelgill beds was seen. Marr mapped it in detail and returned in 1913 and 1914, but it is hard to see today. At Elterwater, Marr looked at a sandwich of glacial tills and interglacial sands & gravels. The area is now covered by quarrying and roads, and while there is some evidence for 2 tills, there are no intervening sands & gravels. At Coniston, the river running from Coniston to Coniston Lake cut a V-valley above a hanging valley. Marr says he found glacial striae near the Miners' Bridge but that they ran at 90 degrees to the direction of the stream bed. Today, as a result of over collection by geologists, it is very hard to see any striae. At Stockdale Beck near Brow Gill a fence was put up by the landowner to stop a London dealer from removing truckloads of graptolites. At one time the site was open and much used by students who collected graptolites for theses. But when the farmer saw a TV programme showing some of 'his' graptolites he said it was stupid that the students needed to come and collect the same thing over and over again – and stopped it! After speaking to a Cambridge professor, the site was made into an SSSI. There are many other examples of the disappearance of sites. Marr would have known well, and perhaps the ultimate outcome is that putting sites in geological guidebooks is the kiss of death!

Michael Collie (York University, Toronto) then talked about endangered geological archives of the north of Scotland. In 1975 the New Moray District Council created its first archival service to preserve archival material as near to its place of origin as possible. This would also include scientific material. Some papers were already in Elgin Museum, and a further 500 documents were gathered to join them, including solicitors papers relating to H.B & L.MacKintosh, Hugh Falconer etc. Supplementary material was also deposited and the archivist arranged for records belonging to the north to be removed from Edinburgh. This was an encouraging start, but was negated by social amnesia - problems of personality, anti history sentiment and ignorance. The Director of Libraries ordered all 500 documents to be withdrawn, and that they should be given back or destroyed ; two weeks were given to clear them. The good faith of depositories was to be ignored, and there would be no record of clearances. It was not possible to say if Falconer's papers went back to the Falconer museum, and Miller's papers were not recovered. Books belonging to Harry Brown were siphoned off by Elgin Library. As for presentation, that is creating the right environment and access, different places have different policies. At the Falconer Museum at Forres, most of the papers were stored sensibly originally; at Elgin museum papers are being re-stored and users will first use a catalogue copy; at Tweddale House the books are secure but not enumerated; at St Andrews geological documents are annotated and put on line; at Aberdeen money has been used on non-geological papers; at Dunrobin castle fortitude of mind will be needed to locate papers in the cellar. Only at Dundee, in the north of Scotland, is active conservation practised, with 7 conservators in a purpose built lab. It is estimated to cost £250/day to conserve even single items.

The final speaker was HOGG Chairman, John Thackray, on archives of the electronic age, and what will survive. Many papers connected with Charles Darwin survive, but had he used a word processor, how many would there be? Contemporary history should not be lost. Archivists traditionally 'mop-up' after death when there is a paper record to be dealt with. Even if the individual gave no thought to preservation, chances are that there is much that can act as sources of information. But in an electronic age this will not work for several reasons:

- a) The proportion of destruction to keeping will be much higher – e-mails tend to be deleted.
- b) By the time the archivist gets the material, the media it's 'written' on will be 20-30 years old, and possibly obsolete. Also the information might have degraded.

- c) The chances are that there is not enough documentation to help in analysis – no watermarks, different handwriting, inks etc

Much information needs to accompany a disc/tape, and it means that individuals need to have a greater personal commitment to the survival of their personal records. The recommendation is to print what YOU want to be sure of its being kept. If the archive contains discs, YOU must appreciate technology changes and act accordingly so that the discs are not redundant by the time they are archived. For institutions there are responsibilities under various Acts, and there will probably be a Freedom of Information Act at some time. Much information is corporate memory and a high staff turnover makes its continuation more important. Organisations need to phase out exclusive printing – the Government produces 30 kilometers of paper files each year – much from electronic sources. Primary electronic documents, that is e-mail databases, have a status in law, which the secondary – the paper printout - may not have. A paper archive has an arrangement and this gives it its value; the same is needed with an electronic archive. Electronic folders which preserve not just documents but the context and interrelationships need central electronic files of a disciplined nature. It needs greater commitment than at present and greater design formats for eventual storage. How long will items need to be kept before weeding? So much information can now be stored so easily, it will not be possible to read the whole folder, so decisions about what is kept will need to be taken at an earlier time. There are problems ahead for archivists.

---

### ...worth a visit?

For those, especially in the west Midlands, unable (but surely not unwilling!) to make the journey to London for the HOGG meeting at Burlington House on 3<sup>rd</sup> March, perhaps a visit to the Broseley Local History Society would be a suitable substitute. Alan Robinson will give a talk on "Geology and mines of the Ironbridge Gorge and surrounding area". This will take place at 7.30pm at the Broseley Social Club in the High Street. Any further information might be available by e-mail from [blhs@dewhirst.ndirect.co.uk](mailto:blhs@dewhirst.ndirect.co.uk), or on their web site at [www.dewhirst.ndirect.co.uk](http://www.dewhirst.ndirect.co.uk).

---

### ... and a conference

#### Drawing from Nature: Art and Illustration in the Natural History Sciences

An International conference at the Natural History Museum, London, 14-16 April 1999

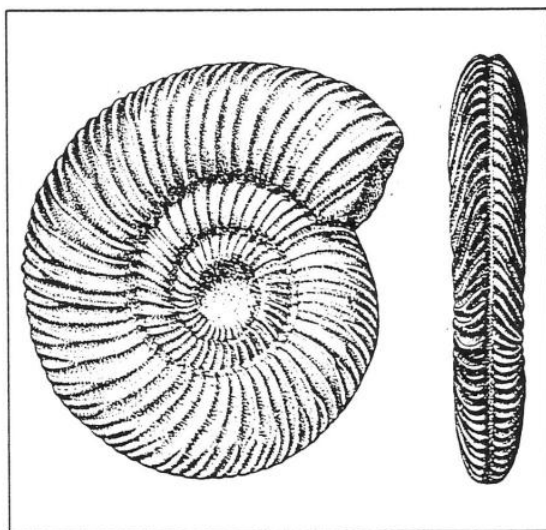


The meeting is divided into 4 themes: Why illustrate?, Authors and illustrators, Museums on paper, and From picture to diagram, over the two days, with a reception from Dr Neil Chalmers of the Natural History Museum, and The Ramsbottom Lecture by Prof. Martin Kemp (Oxford) on the 14<sup>th</sup>. HOGG members might be interested in Prof. Broberg (Sweden) on "Linnaeus and Illustration", Martin Rudwick (Cambridge) on "Cuvier & Illustration", & Peter Crowther (Ulster) on "Palaeontographical Soc. Illustrations". The conference costs £90 for members of the SHNH, and £110 for non-members. Accommodation is available at Imperial College at a cost of £29.50 per night. Anybody interested should contact Paul Cooper c/o Zoology Library, The Natural History Museum, Cromwell Road, London SW7 5BD, or e-mail [p.cooper@nhm.ac.uk](mailto:p.cooper@nhm.ac.uk).

## ...for your bookshelf?

**James Parkinson 1755-1824: From Apothecary to General Practitioner** by Shirley Roberts. 128pp. Fully illustrated. Pub: The Royal Society of Medicine Press. Price £19.95. ISBN: 185315-340-0.

James Parkinson was one of those scientists typical of the late 18<sup>th</sup> - early 19<sup>th</sup> centuries whose interests and talents were such that he was able to make his mark in more than one science, namely medicine and palaeontology. To the medical profession he is remembered today for the eponymous nervous disorder Parkinson's Disease, whilst to the geologist he is best known through the eponymous Middle Jurassic ammonite *Parkinsonia parkinsoni*. In the 20<sup>th</sup> century his scientific work has largely slipped from view,



*Parkinsonia parkinsoni* (Sowerby)

despite having made important contributions to both early modern medicine and palaeontology.

Shirley Roberts' biography successfully re-establishes Parkinson's place as a scientist and a social reformer. Parkinson was the son of a respected apothecary, born into a comfortably placed but not wealthy family typical of the growing middle class of late 18<sup>th</sup> century England. His home was in Hoxton, east London in a substantial Georgian terraced house in Hoxton Square, where he lived for 68 of his 69 years.

His work as an apothecary commenced as an apprentice to his father and occupied most of his time in his early years. During the last decade of the 18<sup>th</sup> century political and social reform filled much of his time and he wrote numerous political tracts. Disillusionment set in and in the later part of his life his reforming zeal was focussed upon the social condition of the poor. He recognised the association between poverty and sickness and involved himself

in improving the treatment facilities available to the poor in hospitals and workhouse infirmaries. He was particularly interested in prevention of disease and wrote numerous books on matters of public health, welfare and, for the layman, family health. His lifetime saw the shift from apothecary to general practitioner.

Throughout his life he had developed a self-taught interest in fossil organic remains and he found time to compile the most authoritative contemporary book in English on the subject. It was published in 3 volumes between 1804 and 1811, *The Organic Remains of a Former World*, written as a series of open letters. Parkinson worked mainly on material brought to him, rather than collecting fossils himself. His work had limitations largely imposed by the fact that he believed in The Flood, (his family were staunch members of the English Church), and therefore he saw all fossils he described as being the flora and fauna on an antediluvian world. He had no feel for the depth of geological time. To his credit, later in life he accepted the modern concepts of the geological succession and wrote of the importance of fossils to the geologist. He is of particular interest to the petroleum geologist for his early researches into the organic origins of crude oils, tars, bitumens, of which he again collected a large number of samples from all over the world.

Perhaps his most lasting contribution to geology was that in 1811 he was one of three medical men among the eleven founding members of the Geological Society of London. He played an active part in the establishment of the Society and was an early Council member. In his later years through his Society activities and the publication of his *Organic Remains* he met Gideon Mantell, a young apothecary and geologist from Lewes, with whom he developed a strong friendship, often going together on early fossil collecting expeditions in Sussex.

This biography succinctly describes Parkinson's life, set in the social background of the times and re-establishes his reputation which has faded, at least among geologists, through neglect in recent years. The text has been enlivened with many contemporary quotations which help give an authentic flavour of the times in which he lived. The book was written primarily for a medical readership but geologists and social historians should read it. All will be informed and entertained.

John Martin

\*\*\*\*\*

**Volcanoes and History**, Proceedings of the 20<sup>th</sup> INHIGEO Symposium, Napoli-Eolie-Catania (Italy), 19-25 September 1995, Ed. Nicoletta Morello, 755pp, Pub: Brigati, Genova, 1998

\*\*\*\*\*

**The papers of H.T. De la Beche (1796-1855) in the National Museum of Wales**, by Tom Sharpe and P.J. McCartney, pub: national Museums and Galleries of Wales, Geol. Series, no. 17, 1998.

\*\*\*\*\*

**Wookey Hole in Somerset and Pope's Grotto at Twickenham, England**, by Trevor R Shaw, in *Cave and Karst Science*, vol. 25, no. 1, April 1998

Among the minerals used to decorate Alexander Pope's artificial Grotto at Twickenham between 1740 and 1744 were stalactites and a "petrification" from Wookey Hole. Stalagmites were cut from the First Chamber of the cave to present to Pope and one of these may be this same petrification. The later is known to have been placed in a part of the Grotto that was buried when Pope's house above it was destroyed in 1807. The probable site in Wookey Hole from which the stalagmites were removed is identified, and the man who took them is named as John Taylor of Wells.

\*\*\*\*\*

**Geohistorische Blätter ; Zeitschrift des vereins "Berlin-Brandenburgische Geologie-Historiker 'Leopold von Buch' i.G."**, vol. 1., no. 1, Berlin 1998, ISSN 1436-3135.

This is a new Journal (in German) which aims to take the wide view of geological knowledge and so encompass geology, stratigraphy, palaeontology, mineralogy, petrography, lithology and geochemistry, as well as geophysics and earth sciences. The Berlin-Brandenburg region may not be seen as a traditional area of geological history. But here in 1770, the Prussian Bergakademie with its workings based on the thoughts of Carl Abraham Gerhadt, was established, here worked Alexander von Humboldt and Leopold von Buch who became world-wide known teachers, here in 1848 the first German geological journal (Deutsche Geologische Gesellschaft) was founded, here were the Academy of Knowledge, the Humboldt University the Technical and Free Universities founded, and here was taught Weiss, Mitscherlich, Rose, Ehrenberg, Beyrich, Stille, Ramdohr, Gothan and Bubnoff. Surely that is plenty enough reason for a journal devoted to geo-history?

**Mineralogy & the Magic Flute**, by Alfred Whittaker, in *Mitteilungen der Osterreichischen Mineralogischen Gesellschaft*, Band 143, 1998.

Mozart's seminal opera *The Magic Flute* was created & realised in the year of his early death, 1791. The opera stands near the transition from the classical to the romantic movement in arts, and, as well as being immensely influential on later works of art, is seen as the ancestor of present-day popular musical theatre.

The opera was also composed at a time when geology was evolving from mineralogy, chemistry from alchemy, astronomy from astrology and mathematics from numerology. Mozart's little known association with the scientists of his days is discussed, especially the mineralogists Ignatz von Born & Sir Charles Lewis Giesecke.

It is suggested that the story of *The Magic Flute* owes much to alchemy & related early mineralogy; the opera's architectonic structure, including its musical structure, owes much to numerology. The plot is in large part an allegorical account or description of the alchemical process and the production of the Philosopher's stone from the *prima materia* stibnite (*spiessglanz*). In particular it is argued that the



amalgamation procedures brought to prominence by the researches of Ignatz von Born most likely provided the ideas behind, if not the immediate direct source of, the main storyline of the opera.

(abstract)

**John Gibson (1778-1840) manufacturing chemist & collector of Pleistocene Fossils from Kirkdale Cave, Yorkshire and Ilford, Essex**, by William H. George, 1998, William H. George Publications, 11 Sterry Road, Barking Essex, IG11 9SJ, ISBN 0953409201, Price £1.40 (incl. P & P).

---

## ...have you seen it, and can you help?

A request has been received to try and locate a copper specimen of some size, which was exhibited at the 1851 Exhibition in London. The specimen originated from the Camborne area of Cornwall. Anyone who has any knowledge of where this specimen might now be, should contact the editor.

Issue number 25 for November 1998, of "Down to Earth" (pub. Geo Supplies, Chapeltown, Sheffield) contained a short article on the search by a Suffolk man for a medal presented to his great uncle Walter Clifford, who was part of a mines rescue unit in North Staffordshire in the early 1900s. Mr Clifford was awarded 3 medals, of which two are in a mining museum at Wakefield, but the whereabouts of the third and most important is unknown. This medal, the Edward VII medal is regarded as the miner's Victoria Cross, and was part of the collection at the now defunct Chatterly Whitfield mining museum; it might have been sold at auction when much of the collection from the museum was disposed of. Mr Clifford's relation would dearly like to know of its whereabouts. If anyone can help, they should contact the editor, who will forward any information.

Tonu Pani is a PhD student and curator in the University of Tartu (Estonia); he teaches history of geology, and museology for geologists. The university is 366 years old, though its first geological collections were not obtained until 1802. In 2002 they will celebrate 200 years of geology. Tonu is currently looking for specialist(s) in German geology/geography to look at a collection of rocks from c. 1840-1850 whose Gothic labels are faded. Anyone like to volunteer? Tonu can be contacted by e-mail on [tpani@math.ut.ee](mailto:tpani@math.ut.ee) , or via the editor.

---

## ...and finally

### Contribution to the Newsletter

Members have asked whether they can make contributions to the Newsletter by bankers' Standing Order, a method of payment that avoids postal expense, cheque writing and memory failure. The short answer is yes! A form to set up a standing order on your bank account in the United Kingdom is provided below. **The HOGG account regrettably cannot handle Direct Debiting.** Please send your completed Standing Order form to the HOGG Treasurer (John Fuller, 2 Oak Tree Close, Rodmell Road, Tunbridge Wells, Kent TN2 5SS). **DO NOT SEND IT TO YOUR BANK** otherwise the Treasurer has no way of knowing you intend making payment by this method. The Treasurer will send the form to the member's bank, and for that to be done a **COMPLETE BRANCH ADDRESS** (including the sort code number) on the form is essential. For those continuing to contribute by cheque, please make cheques payable to "History of Geology Group" and send them to **John Fuller (Treasurer), c/o The Geological Society, Burlington House, London, WV1 0UJ.**



---

**Banker's Standing Order Form for HOGG members**

---

To: The Manager:

(Insert the name of your bank below and the address of the branch where you keep your account)

1. Name of your Bank:.....

2. Postal address of your Branch:.....

.....

.....

3. Your Bank Account Number:.....

4. Sort Code no. printed on your cheques (this is **ESSENTIAL**):.....

5. Instruction to your Bank Manager:

Please pay by Standing Order on the above named account, in favour of the History of Geology Group of the Geological Society (Girobank Account no.14 665 9406, Sort Code 72-00-00) the sum of Seven Pounds annually beginning January 1, 1998, and annually thereafter until terminated by me in writing.

6. Your name: (capitals please).....

7. Your personal mailing address, and postcode, for Newsletter delivery:

.....

.....

.....

.....

8. Your signature: ..... Today's date:.....

9. **Send this form when completed to the Treasurer, at the address given above.**

