



COPROLITE

DROPPINGS
FROM THE
GEOLOGICAL
CURATORS
GROUP

Coprolite is compiled by Tom Sharpe, National Museum of Wales, Cathays Park, Cardiff CF1 3NP (tel 01222 397951 ext.265, fax 01222 667332) and produced by Monica Price, University Museum, Parks Road, Oxford OX1 3PW. It is published three times a year in February, May and November. Any material for inclusion should be sent to Tom Sharpe by the first of the previous month, i.e. by 1 January, 1 April or 1 October.

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GCG Webpage: <http://www.gla.ac.uk/Museum/John/gcg1.html>

Notice of Annual General Meeting

Please note that the 22nd AGM of the Geological Curators' Group will be held at 15.45 on Wednesday 27 November 1996 at the Manchester Museum, Oxford Road, Manchester.

Nominations for the posts of Officers and one Committee Member must be made by two members of the Group and submitted in writing to Amanda Edwards, GCG Secretary, Department of Geology, University of Manchester, Manchester M13 9PL by **6 November**.

GCG Constitution

At an Extraordinary General Meeting held on 26 June 1996 at Liverpool Museum, the proposed Constitution changes published in *Coprolite 20* were unanimously approved. These have also now been approved by the Charity Commission. The new Constitution will be published in full in *Geological Curator*.

New members

GCG is pleased to welcome the following new members: **Martin Jakubowski**, Natural History Museum; **Jane Forster**, Leicester; **Colin Muir**, London; **Paul Sowan**, Croydon Natural History and Scientific Society; **Lis Elinborg Mørtensen**, Museum of Natural History, Faroe Islands; **Lisa Barnes**, Oxford; **Paul Stevenson**, Bristol; **Mark Evans**, Leicester; **Elizabetta Demattio**, Predazzo, Italy; **Natalie Camilleri**, Queensland Museum, Australia; **Richard Unitt**, University College, Cork; **University of Oslo**.

Musical Curators

At the National Museums and Galleries on Merseyside, **Martin Suggett** succeeds Geoff Tresise as Curator of Earth and Physical Sciences, and **Alan J Bowden** was appointed to the post of Curator of Earth Sciences; former GCG Chairman **Howard Brunton** has retired from his post in the Department of Palaeontology at the Natural History Museum. **Mike Simms** has been appointed Curator of Palaeontology at the Ulster Museum and took up his post on the 1st November.

Forthcoming meetings and seminars

27-28 November 1996 Manchester Museum, University of Manchester
GCG Seminar, AGM and field trip: Geological models

Models have always played a significant part in museums' interpretations of specimens and collections. This seminar will explore their role from a variety of viewpoints. Some historical examples will be described (and displayed), the role of models in today's museum displays will be examined, and future developments in computer modelling will be explored:

Wednesday 27 November

10.30 Registration and coffee

11.00 Welcome: Tristram Besterman, Director, Manchester Museum

11.15 Tablets and time-tunnels; *White-Watson's geological cross-sections* on display at Derby Museum: Nick Moyes, Derby City Museum

- 11.45 Crystallography and the geometric modelling of minerals: Peter Tandy, Natural History Museum
- 12.15 The use of models in museum displays: Phil Manning, University of Sheffield
- 12.45 Lunch and visit to Earth Science Collection Centre
- 14.00 **Keynote Address:** Making the Earth move! Interpretation ideas in the Earth Galleries, Natural History Museum: Bob Bloomfield, NHM
- 14.45 Concurrent demonstrations of latest technology modelling (tea will be taken during these sessions):
- Computer modelling of arthropod trackways: Graham Knight, Lyall Anderson & Jason Dunlop, Arthropod Palaeobiology Research Group, University of Manchester
- Minerals and the CD-ROM media; collaborative developments by the National Museum of Wales and the Open University: Richard Bevins (NMW), Andy Tindall & Dave Palmer (OU)
- 15.45 22nd Annual General Meeting

Thursday 28 November

Underground visit to the ancient copper mines of Alderley Edge, Cheshire, courtesy of Derbyshire Caving Club. Meet at Museum at 10.00am or at 'The Wizard', Alderley Edge at 11.00 am. Hard hats and lamps provided.

Meeting fee: £2.00. Please complete the form on page 19 and return it with payment (cheques payable to GCG) to Dr John R. Nudds, The Manchester Museum, University of Manchester, Oxford Road, Manchester, M13 9PL tel 0161 275 2634, fax 0161 275 2676, e-mail john.nudds@man.ac.uk

16-17 April 1997 Torquay Museum, Torquay, Devon

GCG Seminar and fieldtrip: Quaternary collections

Contact: Mike Bishop, Torquay Museum, 529 Babbacombe Road, Torquay TQ1 1HG tel 01803 293975

26 June 1997 Hull

GCG Seminar: Disability and geological displays

Contact: Heather Rayfield tel 01482 613902

20-26 July 1997 Liege, Belgium

20th International Congress of History of Science: Development and cultural influence of geological sciences in an age of technological and industrial expansion.

The two main themes of the conference, for which papers are invited, will be Geology and mining in the Old and New Worlds, and Use of non-written sources for the history of geological sciences.

Contact: XXth International Congress of History of Science, Centre d'Histoire des Sciences et des Techniques, 15 Avenue des Tilleuls, B-4000 Liege, Belgium. Tel 32 041 669479, fax 32 041 669547, e-mail hstulg@vml.ulg.ac.be

30 July - 9 August 1997 Geological Society, London and Royal Society, Edinburgh

Celebration of the bicentenaries of Charles Lyell and James Hutton

The first part of the conference in London (30 July - 3 August) will be concerned with the achievements and impacts of the work of Lyell. The second part (5 - 9 August) in Edinburgh will deal with the past, present and future relevance of Hutton's theories. The lectures will include contributors of international renown and will be interspersed by periods of discussion. The will be followed by visits to classical sites linked with Hutton and Lyell. The programme is being arranged to catch the interest of all, whether geologists or historians.

Contact: Lyell/Hutton Conference Office, Geological Society, Burlington House, Piccadilly, London W1V 0JU tel 0171 434 9944, fax 0171 439 8975.

15 -21 September 1997 City Hall and National Museum of Wales, Cardiff Museums Association 103rd Annual Conference

Contact: Sue Robinson, Conference Organiser, Museums Association, 42 Clerkenwell Close, London EC1R 0PA fax 0171 250 1929

October 1997 Maidstone Museum, Maidstone, Kent

GCG Seminar: Lost worlds, iguanodons and the European perspective

It is hoped that this meeting will include an excursion to Brussels.

Contact: Ed Jarzembowski, Maidstone Museum and Art Gallery, St Faith's Street, Maidstone, Kent ME14 1LH, tel 01622 754497

27 November 1997 Natural History Museum, London

GCG Seminar and AGM: New developments at the Natural History Museum

Contact: Andrew Clark tel 0171 938 9282 or Cally Hall 0171 938 8869

Exhibitions

Dinosaurs then and now 22 February - 5 April 1997 Dundee Museum

New galleries open in London

The Natural History Museum in London has opened the first phase of its new earth science galleries in the former Geological Museum. The main hall of the old museum is now a slate-clad atrium (the *RTZ Atrium*, after the major sponsor) with one of the highest escalators in Europe. This takes visitors up to

the third floor of the building through a huge revolving globe of beaten copper, iron and zinc. *The power within*, the first of the exhibition areas, deals with plate tectonics, earthquakes and volcanoes. Film footage and eye-witness accounts of the 1991 eruption of Mount Pinatubo form the *Volcano Experience*, and a recreated Japanese supermarket with shaking walls and stock tumbling from shelves relives the 1995 Kobe earthquake in the *Earthquake Experience*. Surface processes are dealt with in a more traditional way in the second gallery, *Earth's restless surface*. The new galleries are expected to attract an additional two million visitors annually. Early reports suggest that such high visitor numbers could be a problem: the escalator is having difficulty now with visitor numbers exceeding its capacity as it passes through a revolving globe that often doesn't.

The Cornwall Geological Museum re-opens

After years of hard work and determined effort, the Royal Geological Society of Cornwall re-opened its museum on 19 April 1996. Over 200 people, both local and from much further afield, attended the re-opening ceremony; so many that proceedings were transferred to the adjacent Council Chamber. The Museum was officially opened by Dr Bob Symes, Keeper of Mineralogy at the Natural History Museum, and then all had the opportunity to see the new displays.

The Museum itself is not large, but the tasteful and well-thought out surroundings are a credit to designer Colin Fearon. Minerals are displayed in very modern and well-lit glass cases, and although there's plenty to see and enjoy here, yet more can be viewed in large glass-topped drawers underneath the displays. This 'open storage' was much admired as a way to make systematic collections of less general public appeal available to the serious enthusiasts.

Around the outside are panels of graphics explaining many of the features of Cornish geology. Part of the room is split vertically with a mezzanine level. On the lower level, fluorescent minerals are shown, along with back-lit photographs of some of mines and mining activities - a slight conflict of interests with lighting here, but no doubt this will be resolved. The mezzanine level is devoted to the palaeontology of Cornwall and further afield, with dinosaur footprints set in the floor and overlain by a dense glass panel. While it was the tendency of the 'grown-ups' to carefully walk round the panel, I'm sure children will not think twice about doing what is really expected of visitors, and walk over it.

After a short break, the day's visitors reassembled in the Society's meeting room to hear Bob Symes give a lecture on 'The role of the geological museum

into the next millenium'. Many congratulations go to Colin Sparrow and to the Royal Geological Society of Cornwall for their excellent work in reopening this historic collection to the public. It is open Monday to Saturday 10.00-16.30; admission is £2 adults, £1 children and concessions.

Monica T. Price, Oxford University Museum

Venues sought for a travelling exhibition of Romanian Minerals

The Mineralogy Museum of Baia Mare in Romania has a collection of 15,000 specimens from this historic mining region in Romania. Following successful travelling exhibitions in Austria, Germany and France they are trying to set up an itinerary in Britain between September 1998 and September 1999.

They envisage a display of about 90 mineral specimens including fine specimens of stibnite, rhodochrosite, baryte, manganocalcite and chalcopyrite. *The exhibition would occupy a space of 100-300 square metres.* The venue will supply the showcases, the Baia Mare Museum would supply all specimens, labels, photographs etc.

If you would like further details, please contact Dr Andrei Gorduză, Mineralogy Museum, Bd. Traian Nr.8, 4800-Baia Mare, Romania tel/fax (40).62.43.76.51

Women, science and the environment CWEST mini-conference March 1996

CWEST, Cornwall Women in Science, Engineering and Technology, organised a mini-conference this year as part of Science Week. All secondary schools and colleges in Cornwall, as well as individuals, were invited to submit projects on any aspect of science to be presented by a girl or team of girls at the conference. Although planning began only in January when we received notification of funding from the British Association for the Advancement of Science, eleven schools and one individual entered with a total of 21 projects.

The topics were wide-ranging. Two schools had set up nature trails with pupils discovering the variety of flora and fauna in their area. Another team investigated plant growth on old industrial sites. An ambitious attempt to create an energy park reached out to the future whilst a survey of metals in Cornwall looked back to the past. Some experiments reminded us of the harm we do with smoking and junk foods; a project on cosmetics showed how little value there may be in some expensive products. Others used scientific knowledge and modern technology to design new ways of living, watering plants in hanging baskets and aids for the disabled. Two industrial problems were tackled and the outcome was a new design of sewage filter system and proposals for combating

an increased pH in water pipes. Computers were employed with enthusiasm to illustrate presentations and design camping equipment, a music block, a special horse box and a theatre set. Art, science and technology were brought together to show us the wonders of space and how we might help the blind appreciate art. Scientific method was illustrated with research into the effect of sound on a candle flame.

The finalists gave very impressive verbal, computer and video presentations and the remaining teams put up poster displays. Winners received £100 for the team, £100 for the school and the CWEST Science Challenge Shield. The shields were donated by Barbara Chard, Transport Group Cornwall County Council, and Alan Bromley of Petrolab Geological Consultants. We were considerably helped by over thirty sponsors from industry, education and private sources.

The conference was opened by Lesley Atkinson, geologist and founder of CWEST. An enthusiastic keynote address was given by Barbara Chard, a Chartered Engineer who runs the Junction Unit of Cornwall County Council Highways Department. The judges for the competition were: Jo Cole (environmental correspondent), Tammi Greswell (researching into aerospace manufacturing), Jenny Trethewey (senior technician with a water company). We were very fortunate to secure the help of three young professional women who provided excellent role models for our aspiring scientists. Marks were allocated for originality, presentation, methodology, technical understanding and general commitment.

The junior projects were all well presented but the decision to award first prize to Emily Tryhorn was met with overall approval. Emily decided to try to bring art alive for blind people by building a 3-D image of a famous print and incorporating it into a clock. During a buffet lunch the poster competition was judged by members of the CWEST committee.

The senior presentations provided even more problems for the judges as only a few marks separated the finalists. Ailsa Laxton from Liskeard won with her team's research into the needs of disabled people and a device to turn on taps and pick up objects. In conclusion, Councillor Shirley Beck, former Mayor of St Ives, gave a positive and encouraging speech and congratulated the participants. She presented shields and cheques to the first prize winners and a book and certificate to each competitor.

Lesley Atkinson, Camborne School of Mines

The 3rd International Conference on Mineralogy and Museums, Eötvös Lorand University, Budapest, Hungary 9-12 June 1996

This was a welcome opportunity to meet old friends of past 'M&M' conferences (in London in 1988 and in Toronto in 1992), from the UK and overseas.

The organisers had arranged a fine pre- and post-conference programme of field excursions to modern and classic Hungarian localities, many of the latter now in Slovakia and Romania. It was a hard choice; west and central Slovakia won. Our party of eleven from the UK, Germany, Norway, USA and Australia, were joined by an ever growing support group of guides and translators from museums, universities and scientific societies in Hungary and Slovakia. The names of many of the localities we visited will be familiar - L'ubietová (Libethen) the type locality of libethenite, Špania Dolina (Herrengrund) the type locality for devilline, Kremnica (Kremnitz) with its gold mines and historic mint, and Banská Štiavnica (Schemnitz) home of the oldest mining academy in the world, with its silver and gold mines, and historic architecture. There were lots of museums on the itinerary; the new 'Treasures of the Earth' exhibition at the Slovak National Museum in Bratislava, the mineral displays and collections at Comenius University, Bratislava, and the very extensive systematic exhibits of the Slovak Mining Museum, Banská Štiavnica to name a few. At each we received a warm welcome.

Between mines, quarries and museums we enjoyed the local hospitality; our first lunch break setting the standards, with a visit to the cellars to assist with the selection of the wine to accompany the meal... After lunch, an underground trip to an old gold and antimony mine at Pezinok was followed by a woodland trek to one of very few world localities for the rare garnet goldmanite.

Then it was down to business, just as Budapest succumbed to a mega-heatwave. The first day was reserved for conference registration, and for business meetings of the *International Mineralogical Association's* various commissions. Demonstrations of environmental scanning electron microscopy were held in the University, and tours of the collections of the Hungarian Geological Survey preceded the opening ceremony at which Jeffrey Post gave the keynote address describing the development of the new Hall of Geology, Gems and Minerals shortly to open at the Smithsonian Institution.

Oral presentations over the next three days were divided into themes ranging from 'Type specimens and topographic mineralogy', 'Practical museology', and 'Computer application and networking' to 'Crystal chemistry of minerals; research on new and doubtful species' and 'Mineralogical museums in society'. Two poster sessions were held on themes corresponding to the oral sessions, and a further display of posters on the theme 'Mineral museums worldwide'

lasted all three days. A total of 125 oral and poster presentations were given during the course of the conference. One afternoon was given over to group meetings. The Mineral Museums' Internet Group Initiative was convened by Jana Horak of the National Museum of Wales to set up an Internet mail-board to help communicate locality data and other information between curators. This was followed by a meeting of the Society of Mineral Museum Professionals, which although based in North America, has a growing membership in Europe. During the conference, delegates were welcome to visit the new accommodation for the Hungarian National Museum's mineral collections, a former military academy now fitted out to provide extremely good storage and working space for the mineral department.

The final day of the conference saw a mass migration of delegates to Miskolc, Hungary's second largest town. Stops on the journey were made to see the modern systematic displays of the Mátra Museum in Gyöngyös, (there even our large party was outnumbered by school children), at the Herman Ottó Museum in Miskolc, to see its comprehensive modern exhibit of Hungarian minerals, and at the University of Miskolc to look at the historic library of the Schemnitz Mining Academy now housed there.

A round table discussion was held in the evening, chaired by Bob Symes of the Natural History Museum, London. A need was clearly recognised for greater collaboration and communication between museum mineralogists, and for a strategy to increase the profile of museum mineral collections, stressing their relevance to science, education and environmental issues. It was felt museum mineralogists needed to be able to quantify the use of their collections, increase access through the use of good databases, promote their collections to as wide an audience as possible, and take action to ensure that the next generation of museum mineralogists appreciate the value of mineral collections. It was agreed a resolution would be taken to the Second World Congress on the Preservation and Conservation of Natural History Collections in Cambridge in August 1996. The discussion was followed by the conference dinner, a warm invitation to hold M&M4 in Melbourne, Australia (a final decision will be taken by the IMA's Commission on Museums), and the next morning, the return to Budapest.

M&M conferences provide a welcome opportunity to meet other museum mineralogists from all over the world; this one was attended by 183 delegates from 33 countries, Russia and Eastern Europe being particularly well represented. I'm grateful to the MGC for grant-aid to attend what proved again to be a very interesting conference.

Monica T. Price, Oxford University Museum

GCG seminar: Promoting museums with new technology
26 June 1996, Liverpool Museum

The meeting began with a welcome by Martin Suggett, the new Curator of Earth and Physical Sciences at Liverpool who introduced the new Curator of Earth Science, Alan Bowden and the familiar faces of Wendy Simkiss, Tony Morgan and Phil Phillips. John Faithfull (Hunterian Museum) chaired the meeting, and spoke first. He took a sceptical view of the potential of new technology in museums and warned us to beware of the amount of time such involvement can take up. While new technologies can be seen as allowing us to curate faster, better and more, they also take up time by allowing us to do things, not because we *need* to do them, but because we *can* do them. The World Wide Web offers an attractive and useful way of disseminating information and a standard way of organising it. It is important to try and keep the extra work involved in setting up and maintaining Web pages to a minimum. Don't be too ambitious and recognise the value of basic information such as, for example, your museum's *Yearbook* entry.

The second speaker was David Walter from Alpha Collections Management Ltd, a software development company based in Milton Keynes. He described a software package called Medusa which runs under Windows, and gave examples of how it operated at Milton Keynes Museum.

Phil Phillips, Head of Information Systems at Liverpool Museum then spoke about his pioneering work at Liverpool, in particular about the Jason project in which he has been involved for the last four years. This has given Liverpool live links to Hawaii, the Sea of Cortez, Belize and the Florida Keys, each with 55 one-hour shows over a two week period. In addition to meeting the educational goals of the museum, the advantages of participation in the project include raising the profile of the museum and attracting media interest; attracting new types of corporate sponsorship for museum activities; and the acquisition of expertise and hardware useful for other museum programmes. The project also provides a way of exposing the potential of new technologies to museum staff. Video links from behind the scenes to the Natural History Centre and even live underwater remote tours of the Albert Dock have been among the spin-offs.

In one of the most practically informative talks of the day, Colin Smith, Business Development Manager of U-net, a service provider based in Warrington, gave a very useful introduction to the Internet, how it works, the services it provides, the World Wide Web and how to get connected. He explained the costs of setting up a Web page and gave useful guidelines on Web publishing.

The morning session closed with the official launch of GCG's home pages on the World Wide Web, put together by GCG Recorder John Faithfull at the University of Glasgow. These contain details of meetings and events, and may in future include the full text of *Coprolite*. The pages, which include useful links to other related sites, can be found at:

<http://www.gla.ac.uk/Museum/John/gcgl.html>

An extended lunch break gave an opportunity to view the GCG pages and its 'useful links', and to see a demonstration of Medusa.

Norman Macloed from the Natural History Museum began the afternoon session by describing the NHM's Web pages. This highly-regarded site has now been up and running for two years and has been through two revisions. It includes pages devoted to research topics which are prepared by the scientists themselves. The nature of the Web allows the NHM to provide science background to topical subjects in pages called 'Science casebook'.

Cathy Hunt from the UK Consortium for Computer Aided Learning (CAL) described the work of the UK Earth Science Courseware Consortium representing earth science departments in UK higher education institutions. This group was established in 1992 to develop computer-aided learning material for undergraduate teaching. By the summer of 1996, 21 modules covering a range of earth science topics had been designed to complement traditional teaching. Each module is equivalent to about four hours of conventional teaching and gives students greater control of work pace and order. They make use of animations and interactives, so for example, a student can measure the extinction angle on plagioclase twins. Some are linear, covering a specific range of material. Others are more exploratory. The idea of CAL can be extended to include interactive navigation around the museum to locate specific displays, to add background material to existing displays, or to provide material for use in resource areas. CAL gives another way of presenting material and can bring to life things that be otherwise be dull and static, offering a way of reaching younger people.

This meeting, attended by about 30 people, provided a very useful insight into the latest technology available to us for curation, interpretation and publicity. Thanks are due to Wendy Simkiss, Phil Phillips and their colleagues at Liverpool for such a stimulating programme.

Tom Sharpe, National Museum of Wales

Second World Congress on the Preservation and Conservation of Natural History Collections

Held at Cambridge on 20 to 24 August 1996, the conference was intended to discuss the initiatives recommended at the First World Congress in Madrid in 1992 with the establishment of the World Council on Collections Resources. The objectives were to establish a global resource network for collections, co-ordinate research and increase awareness of, and funding for, projects.

Natural history collections were defined as including whole ecosystems and environments and good communication was deemed essential in shaping the public perceptions of collections. The issues concerning value and valuation of collections were addressed early in the conference as was the problem of popular research not necessarily being directed at the most crucial issues.

Information technology was seen as being important for the future of collections, but it was mentioned that it would involve a new way of thinking to achieve the building of an information system and co-operative specialisation. This was to be regarded as both an opportunity and a challenge. The importance of collections care and maintenance was stressed, together with some interesting and unusual uses for the collections as a resource. This led on to the questions of accessibility, repatriation and co-operation with a view to sharing the collections. Several papers were then given outlining the future directions in the care and management of collections including themes on training of specialists, the importance of conservation and standards in care.

International requirements for the development of natural history collections were stressed in the next session, and for this three very different case studies were presented, concerning a lack of funds, resources and experience. Some other pressures and solutions for these were mentioned, together with some very successful schemes used for fund-raising. The final session looked at schemes that already involved international co-operation.

In addition to the papers, there were also a number of workshops on information technology, conservation and fund-raising, as well as a large selection of poster presentations. The workshops were excellent and seemed to be popular.

The conference concluded with the emphasis on co-ordination of resources rather than duplication of the services and schemes that already exist successfully. It was decided to appoint two people to establish a group to manage this and a World Council on Collections Resources mailing list was set up.

Altogether, the conference provided a useful focus for ideas, and despite the hectic schedule, there was plenty of opportunity for questions and discussion.

Wendy Simkiss, National Museums and Galleries on Merseyside

**Museums' Association 102nd Annual Conference, Harrogate,
Monday 30 September GCG Session:
Developing geological collections: the Yorkshire perspective**

This lively session, attended by 21 delegates, examined aspects of the geological collections and fossil collecting in Yorkshire. The introductory paper by the well-known double act of Simon Knell and Mike Taylor looked at historical aspects of collecting and the early years of Yorkshire's museums. The 1820s saw the establishment of most of the major museums in the county and, as this was also the golden era of fossil collecting, it is not surprising that these museums became preoccupied with collecting fossils. Some interesting case histories were described and the history of some of the best finds were explored.

Kate Andrew and Rosemary Roden presented a joint contribution describing their freelance work on the conservation and curation respectively of the collections at both Scarborough and Whitby. It was wonderful to see many of the historical specimens as described by Knell, painstakingly conserved and once more displayed in their former glory. This work is ongoing and has been partly funded by the National Heritage Memorial Fund (that's the lottery!). Finally, Paul Ensom described The Yorkshire Museum Collections from the historical perspective and the present day collecting policy, and ended in his usual provocative manner, by suggesting some future initiatives on funding and collecting practices that could herald the return of the golden age of fossil collecting in Yorkshire.

John Nudds, The Manchester Museum

Newish publications

The value and valuation of natural science collections edited by J R Nudds and C W Pettitt, 1996. Geological Society, 230pp. ISBN 1 897799 76 4, £55.00

Understanding fossils. An introduction to invertebrate palaeontology by Peter Doyle, 1996. Wiley, 409pp. ISBN 0 471 96351 8, £17.99.

Fife and Angus geology by A R MacGregor, 1996. Pentland Press, 291pp. ISBN 1 85821 353 3, £12.50

Cornwall's geology and scenery by Colin M Bristow. Cornish Hillside Publications. ISBN 1 90014 700 9, £13.99.

Fossils of the Upper Ordovician edited by David A T Harper and Alan W Owen, 1996. Palaeontological Association Field Guides to Fossils no. 7. ISBN 0 901702 57 9, 312pp. £16.00.

Scottish rocks and fossils by Alan and Moira McKirdy. HMSO ISBN 0 11495 273 6, £4.50.

Discovering geology fossil focus: belemnites by B M Cox, 1996. British Geological Survey ISBN 0 85272 256 7, £1.95.

United Kingdom Minerals Yearbook 1995. British Geological Survey, 1996. ISBN 0 85272 270 2, £30.00

Building from basics by B J Taylor and H J Heason, 1996 British Geological Survey, 25pp. ISBN 0 85272 272 0, £4.00

Geologists and the history of geology: an international bibliography, supplement II (1985-1993) by W A S Sarjeant, 1996. Krieger, 2386pp. ISBN 0 89464 880 2, \$365.00

British Regional Geology. London and the Thames Valley by M G Sumbler, 1996. 4th edition. HMSO, x + 173pp. ISBN 0 11 884522 5, £14.00

Metallogenic map of Britain and Ireland, 1: 1 500 000, British Geological Survey, 1996. £25.00

Tectonic map of Britain, Ireland and adjacent areas, 1 : 1 500 000, British Geological Survey, 1996. £25.00

Industrial mineral resources map of Britain, 1 : 1 000 000, British Geological Survey, 1996. £25.00

Valuation conference volume published

The Geological Society Publishing House has just published *The value and valuation of natural science collections* edited by GCG Chairman John Nudds and Charles Pettitt. This volume contains 45 papers presented at the international conference organised by BCG and GCG in Manchester in April 1995. Its list price is £55, but it is available to GCG members at the special price of £25 (US\$42) until 31 December 1996. Place your order now for Christmas! Orders to: Geological Society Publishing House, Unit 7, Brassmill Enterprise Centre, Brassmill Lane, Bath BA1 3JN. Tel 01225 4445046, fax 01225 442836

Mineral shows

9-10 November 1996 Kempton Park Rock 'n' Gem Show, Grand Hall, Kempton Park Racecourse, Staines Road East, Sunbury-on-Thames, Middlesex 10.00-17.00. Admission adults £2.00, OAPs £1.50, children (8-16 years) £1.00.

Contact: HD Promotions Tel: 01628 21697 or 01494 450504, Fax: 01494 450245.

23 November 1996 Sussex Mineral Show, Clair Hall, Haywards Heath, Sussex 10.00-16.00

Contact: Sussex Mineral and Lapidary Society Tel: 01444 233958.

8-9 March 1997 NEW! York Rock 'n' Gem Show, York Racecourse, York. 10.00-17.00. Admission adults £2.00, OAPs £1.50, children (8-16 years) £1.00.

Contact: HD Promotions Tel: 01628 21697 or 01494 450504, Fax: 01494 450245.

16 March 1997 Oxford Spring Mineral and Fossil Show, The Exeter Hall, Oxford Road, Kidlington (just north of Oxford) 10.00-16.30.

The University Museum will be open as usual (12.00-16.00) with a special bus service between the Museum and Show.

Contact: Paul Lowe, Endsleigh Book Co., Endsleigh House, 50 Daniell Road, Truro TR1 2DA. Tel/fax: 01872 223227.

Geological Society Web pages

The Geological Society has launched its Home Page on the World Wide Web. It includes information about the Society, membership, publications, meetings, and regional and specialist groups. The URL address is: <http://www.geolsoc.org.uk/>

MDA launches on-line guide to terminology resources

wordHOARD is MDA's new, on-line guide to terminology resources relevant to museums. It links to a selection of thesauri, classification systems and other authority files, many of which can be accessed free. *wordHOARD* is accessible from MDA's WWW Home Page at <http://www.open.gov.uk/mdocassn/index.htm>

The first edition of *wordHOARD* was compiled by Kevin Gosling, then MDA's Terminology Projects Manager. MDA intends to develop the site into a regularly-updated clearing house for news about museum-related terminology initiatives in the UK and abroad.

MDA also hopes that *wordHOARD* will demonstrate the potential of the Internet to deliver information resources of real practical use to the museum community. The resources currently available on-line include:

- Fossil and Recent brachiopod genera list, Smithsonian Institution
- Gazetteer of UK placenames, Ordnance Survey
- Mammal species of the world, Smithsonian Institution
- World list of insect families, Smithsonian Institution
- Vascular plant families and genera, Royal Botanic Gardens, Kew.

MDA's Home Page also includes a museum e-mail directory; information on consultancy and practical services that MDA can provide; a list of SPECTRUM advisors; the full text of *SPECTRUM Essentials*; and information about forthcoming MDA events.

The Constructivist Museum

As mentioned in *Coprolite* 19 (February 1996), I reviewed a paper by Professor George E Hein, (Director of the Program Evaluation and Research Group at Lesley College, Cambridge, Massachusetts) at the GCG seminar in Ludlow. For those of you not there, but interested in new ideas on learning theory a brief resume of his paper is given here. If you wish to read it in full you will find it in *JEM* 16, the journal of the Group for Education in Museums.

Constructivism, a learning theory now often referred to in museum education, 'argues that both knowledge and the way it is obtained are dependent on the mind of the learner.... Proponents of constructivism argue that learners construct knowledge as they learn; they don't simply add new facts to what is known, but constantly reorganise and create both understanding and the ability to learn as they interact with the world. Further, the knowledge that is constructed through this process is individual or social, but has no ontological status outside the mind of the knower.'

So in our work, particularly in displays and exhibitions 'focus needs to be on the learner, not on the subject to be learned' (ie the visitor and not the content of the museum). Many older displays are of a more systematic approach assuming that learning is incremental; information being added to a passive mind bit by bit. More modern approaches relying on the idea that people learn by doing and discovering for themselves as in science centres. If we believe the idea of constructivism we should be designing our museums appropriately. Hein thinks 'we can develop museums that can respond to the dispositions of our visitors and maximise the potential for learning. The constructivist museum acknowledges that knowledge is created in the mind of the learner using personal learning methods. It allows us to accommodate all ages of learning.' To do this requires that 'exhibits allow visitors to draw their own conclusions about the meaning of the exhibition..., that multiple paths are possible...and the learner is provided with a range of modalities to acquire information. Another component of the constructivist museum would be the opportunity for the visitor to make connections with familiar concepts and objects. In order to make meaning of our experience, we need to be able to connect it with what we already know.'

Kate Pontin, Uxbridge

A national strategy for systematic biology research The UK Systematics Forum

In January of this year, the UK Systematics Forum secured additional funding to December 1998 from the Office of Science and Technology, with the principal aim of developing a national strategy for systematic biology research. The Forum was initially set up in February 1994 to promote communication and coordination within the systematics community. Since then, the group has established a number of initiatives (see below) aimed at developing a network of UK systematists in order to improve coordination of the nation's collections and associated expertise. These activities will provide the basis for carrying out the Forum's second phase of work: to develop a strategy for UK research in systematic biology.

A national strategy for systematics research will be developed with consensus from the wider systematics community. It will aim to identify priorities for the UK's expertise and resources in systematics by assessing scientific and user needs. The strategy should help to promote the best possible use of available resources by enhancing co-operation and collaboration between institutions, and to strengthen the case for funding of systematic biology.

Commitment to the strategy has already been expressed by the Directors of the leading UK collections-holding institutions at a meeting held in April 1996. This meeting was convened by the Forum to initiate discussion on content of the strategy and to build commitment to the initiative. The next phase will involve a survey of collections-holding institutions to gather baseline information on their current policies for systematics collections and research, and surveys of scientific and user needs for systematic biology research. Once a preliminary strategy has been developed, the Forum will carry out a wider consultation process to ensure that the final document has wide support.

Development of the national strategy will take place alongside the Forum's ongoing activities in its role of promoting coordination: developing a database of UK systematics expertise, and supporting meetings of specialist groups of collection managers. Information from the database of expertise is available from a searchable directory, accessible from the Forum's Home Page (<http://www.nhm.ac.uk/uksf>). Certain information in the directory, such as the spread of expertise across taxonomic groups, will be used in developing the national strategy. UK systematists not currently included on the database are therefore urged to complete and submit a questionnaire - available either on-line or from the Secretary.

Further information is available from: The Secretary, UK Systematics Forum, c/o The Natural History Museum, Cromwell Road, London, SW7 5BD. Tel: 0171 938 9522, fax: 0171 938 9531, e-mail: ew@nhm.ac.uk

James Hutton Plaque Fund

As part of next year's celebration of the bicentenary of the death of James Hutton, the Edinburgh Geological Society are planning to unveil a plaque on the site of the house on St Johns Hill where he wrote the Theory of the Earth. A fund has been set up cover costs and donations are being sought. If you would like to contribute, cheques payable to the Edinburgh Geological Society should be sent to the Hon. Treasurer, Dr David Gould, British Geological Survey, Murchison House, West Mains Road, Edinburgh EH9 3LA.

Continental jet sought

Samples of jet, shale and cannel coal from localities on the Continent are being sought by archaeologists at the University of Newcastle upon Tyne.

Identifying the various black, shiny materials used by the Romans for making jewelry and other objects has long been a problem. The most accurate methods of identification have been destructive while the techniques which are less harmful to the objects have mostly been limited to distinguishing between jet and shale and have failed to identify accurately other materials such as cannel coal or to pinpoint the sources of raw jet.

The Fossil Fuels and Environmental Geochemistry Institute at the University of Newcastle upon Tyne has been able to adapt techniques used for fossil fuel surveys to the study of archaeological artefacts. An initial project between the Institute and the Museum of Antiquities at the University resulted in the accurate analysis of a group of objects from Hadrian's Wall. This work is likely to have a far-reaching effect on artefact research and the study of Roman trade patterns.

The Newcastle team is now extending its research to include material from other Roman sites in Britain as well as on the Continent. While many museums have been supportive in allowing the team to analyse Romano-British artefacts, the project is suffering from a lack of comparative raw material. If any GCG member has access to jet, shale, cannel coal or any other black shiny material of a similar type from *known* sources in Germany, France or Spain, and is willing to spare a tiny fragment for analysis, the team would be extremely grateful.

If you can help, or if you know of any previous analysis of Continental material, please contact Lindsay Allason-Jones, Museum of Antiquities, University of Newcastle upon Tyne, Newcastle NE1 7RU. Tel 0191 222 7846.

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