No. 49 March 2006

Coprolite is compiled and produced by Tom Sharpe, Department of Geology, National Museum of Wales, Cardiff CF10 3NP (tel 029 20 573265, fax 029 20 667332, e-mail Tom.Sharpe@museumwales.ac.uk). It is published three times a year in March, June and November. Any material for inclusion should be sent to Tom Sharpe by the first of the previous month, i.e. by 1 February, 1 May or 1 October.

Chairman's Report

One of the major accomplishments of 2005 was the publication of *The State and Status of Geological Collections in UK Museums: 2001* as *Geological Curator*Volume 8 No 3. The report contains a snapshot of information relating to; the size and nature of geological collections, staffing levels, documentation, storage, environmental conditions, condition of collections and services provided. We now have a valuable resource to draw upon, to support our day-to-day work and our championing of geological collections. It has also provided a tool allowing comparisons with other collections held by institutions in Europe and beyond. GCG members have already received their copies and should be making good use of them. In 2006 the aim of the group will be to take the findings of this report and to publicise them to a wider audience.

This year we have been in contact with a number of institutions, concerning the future well-being of their collections: the Department of Geology at University of Leicester, the Geological Museum of Lisbon and the Fersman Museum, St Petersburg.

One of the best ways that we able to learn about the wonderful, challenging, breadth of material that geological collections contain, is to visit different collections. Our seminar series, in part, reflects this idea and our former visits to European museums and collections also widened our experience. We have decided in 2006, to concentrate on UK collections and our first study trip will take place in October, jointly visiting the collections in Liverpool and Manchester. May I urge as many members as possible to attend; you will find it to be most rewarding.

The re-launching of the GCG Web pages with improved appearance and content is seen as a priority for the coming year. Camilla Nichol and Dave Gelsthorpe will be involved in this process.

Publications remain vitally important to the Group, and we should thank Patrick Wyse Jackson for his continued expertise in editing the *Geological Curator*. I would like to encourage everyone to think of material they may wish to include in future issues of the journal.

The SPNCH meeting held in June was a great success, the meeting abstract is available free of charge from Giles Miller at the Natural History Museum.

Back copies of *Geological Curator* are housed in the Manchester Museum. There are 7 volumes, with 10 issues per volume, 70 issues in total. All issues are available for purchase.

At the end of today's meeting the following people will stand down from their positions on Committee: Giles Miller has served for 4 years as Secretary to the group, in a courteous and approachable manner. As first point of contact for the group he has raised concerns to the most appropriate people and of course

arranged our Committee meetings; Sara Chambers, as Treasurer, who has served reliably for 2 years despite the challenges of travelling from deepest Cornwall! Our thanks also go to Andrew Ross who has completed his term on Committee. And to Philip Doughty who has been our representative on the BGS Collections Advisory Committee

Mandy Edwards, GCG Chairman

Coming soon: a new-look website for GCG

Look out for GCG's refurbished website, coming to a PC near you soon. In the past, our website has been hosted at the workplace of the GCG committee member responsible for the website, and as people have moved, so the website has got a bit left behind with the result that access to update the site has sometimes not been easy. We now have the site commercially hosted and under the control of Camilla Nichol and Dave Gelsthorpe at York who are working hard on the new site.

New members

GCG is pleased to welcome the following new members: Paul Downhill, Ashton Under Lyne, Lancashire; and Louise Neep, British Geological Survey.

GCG Committee 2006

Chairman: Mandy Edwards, Department of Earth Sciences, University of Manchester Manchester M13 9PL tel 0161 275 3825 fax 0161 275 3947 email mandy.edwards@man.ac.uk

Secretary: Matthew A Parkes, Natural History Division, National Museum of Ireland, Merrion Street, Dublin 2, Ireland tel +353 87 122 1967 email mparkes@museum.ie

Treasurer: Helen Kerbey, Department of Geology, National Museum of Wales, Cathays Park, Cardiff CF10 3NP tel 029 20 573367 fax 029 20 667332 email Helen.Kerbey@museumwales.ac.uk

Programme Secretary: Steve McLean, Hancock Museum, Barras Bridge, Newcastle upon Tyne NE2 4PT tel 0191 222 6765 fax 0191 222 6753 email s.g.mclean@ncl.ac.uk

Journal Editor: Patrick Wyse Jackson, Department of Geology, Trinity College, Dublin 2, Ireland tel +353 1 608 1477 fax +353 1 671 1199 email wysicknp@tcd.ie

Newsletter Editor: Tom Sharpe, Department of Geology, National Museum of Wales, Cardiff CF10 3NP tel 029 20 573265 fax 029 20 667332 email Tom.Sharpe@museumwales.ac.uk

Recorder: Helen Fothergill, Keeper of Natural History, Plymouth City Museum & Art Gallery, Drake Circus, Plymouth, Devon tel 01752 304774 fax 01752 304775 email helen.fothergill@plymouth.gov.uk

Minutes Secretary: Tony Morgan, Natural History Centre, Liverpool Museum, William Brown Street, Liverpool L3 8EN tel 0151 478 4286 fax 0151 478 4390 email Tony.Morgan@nmqm.org

Committee Members: David Gelsthorpe, Yorkshire Museum, Museum Gardens, York YO1 7FR tel 01904 687621 email David.gelsthorpe@ymt.org.uk Mike Howe, British Geological Survey, Keyworth, Nottingham NG12 5GG tel 0115 936 3105 fax 0115 936 3200 email mhowe@bgs.ac.uk

Coopted members: Steve Thompson, North Lincolnshire Museum, Oswald Road, Scunthorpe DN15 7BD tel 01724 843533 fax 01724 270474 email Steve.Thompson@northlincs.gov.uk; Camilla Nichol, Yorkshire Museum, Museum Gardens, York YO1 7FR tel 01904 687687 fax 01904 687655 email camilla.nichol@ymt.org.uk

Musical curators

Matthew Parkes has left his post with the Geological Survey of Ireland and has been appointed Assistant Keeper for Earth Science at the Natural History Museum in Dublin, based in Beggars Bush; Phil Manning, formerly Curator of Palaeontology at the Manchester Museum, has taken up the post of Lecturer in Palaeontology in the School of Earth, Atmospheric and Environmental Sciences at the University of Manchester, and Research Fellow in The Manchester Museum. Within the School of Earth, Atmospheric and Environmental Sciences, Phil will be developing and delivering teaching and learning programmes in vertebrate palaeontology, and continuing with his dinosaur-related research and publications. Within the Museum, his particular remit is to develop links with the media to enhance public engagement with vertebrate palaeontology and with science generally, to support the academic and public programmes of the Museum and the School of Earth, Atmospheric and Environmental Sciences. David Gelsthorpe, currently at York, has been appointed Curator of Palaeontology at the Manchester Museum. Paul Ensom, Assistant Curator at the Dorset County Museum (1978-1989), Keeper of Geology at the Yorkshire Museum (1989-1997), and latterly Collections Leader in the Department of Palaeontology at the Natural History Museum (1998-2005), has started a new career working for himself. Apart from and museum consultancy work, lecturing and writing (contact email P.Ensom@pensom.fsnet.co.uk), is selling secondhand books as time permits. If there are any members of GCG who have particular subject interests, Paul invites them to let him know and he will send them details of relevant stock he holds as listings become available, or keep a watch for any items they are seeking.books, contact Paulensomslibrary@pensom.fsnet.co.uk

John Fowles

GCG members will have been saddened to hear of the death of the novelist John Fowles on 7 November 2005. He was 79. For many years he was Honorary Curator of Lyme Regis Museum. He had a strong interest in the local geology and in the history of geology in Lyme, which was demonstrated in his novel *The French Lieutenant's Woman*. He attended the 1999 Mary Anning Bicentenary Conference of which GCG was co-organiser, and hosted a memorable strawberry tea in his garden.

Newish publications

The geology of Oxfordshire by Philip Powell, 2005. Wimborne: The Dovecote Press, 108pp. £12.95

New museum theory and practice. An introduction edited by Janet Marstine, 2006. Oxford: Blackwell, xii + 332pp. ISBN 1 4051 05593, £19.99

Cabinets for the curious. Looking back at early English museums by Ken Arnold, 2006. Aldershot: Ashgate Publishing, xii + 297pp. ISBN 0 7546 0506 X

Fossil, mineral and gem shows 2006

- 4-5 March Cheltenham Racecourse, Prestbury Park, Cheltenham, Gloucestershire
- 18-19 March Kempton Park Racecourse, Staines Road East, Sunbury, W London
- 8-9 April Chilford Hall, Linton, Cambridge
- 22-23 April Lincoln Showground, Grange-de-Lings, Lincoln
- 6-7 May Alexandra Palace, Wood Green, London
- 3-4 June Kempton Park Racecourse, Staines Road East, Sunbury, W London

For further information contact Rock and Gem Ltd, PO Box 72, Maidenhead SL6 7GB tel 01628 621697 email info@rockngem.co.uk www.rockngem.co.uk

Best practice guidance for the management of fossil sites

The concepts of 'responsible collecting' and the Earth Science Site Classification are established tools developed by English Nature to aid the understanding and management of geological sites. However, for many people, especially those not familiar with fossils or the sites they come from, it can be difficult to appreciate the issues that surround the identification of best management regimes. Geological sites vary greatly from sensitive cave deposits and abandoned mine dumps to robust working quarries and rapidly eroding coastlines. Not surprisingly, the threats to the palaeontological interests vary greatly between these sites and so should the management. Tony Weighell (Joint Nature Conservation Committee), Jonathan Larwood (English Nature) and Richard Edmonds (Dorset County Council) have written a consultation paper on the subject titled 'Sustainable site-based management of collecting pressure on palaeontological sites', with the aim of producing best practice guidance to non geologists, principally landowners and managers, based on a consensus from the geological community in its broadest sense. Such guidance has international relevance in the context of World Heritage sites and Geoparks, and we look forward to contributions to the debate from site managers around the world. The paper identifies ten key management questions and these, when applied to the Earth Science Site Classification, point towards broad management options appropriate to individual sites. A number of national and international examples have been included to illustrate the concept and more are welcome. This is a consultation document and everyone is encouraged to express their views through a feedback questionnaire. The paper is accessible at: www.geoconservation.com/conference/.

Richard Edmonds

Hancock Museum - Great North Museum Project

Following a successful Stage 2 pass by the Heritage Lottery Fund on 24 January this year, it is now confirmed that the Hancock Museum in Newcastle upon Tyne will close to the public on 23 April 2006. From that time until the end of September 2006, the collections will be packed up and put into temporary storage. This means that the entire Hancock collection will be relatively inaccessible from September 2006 until the beginning of 2008 when it will be relocated to a new permanent storage facility. The Hancock Museum is scheduled to re-open to the public in early 2009.

So if you have a desperate need to borrow Hancock material for research purposes, please ensure you get your request in as soon as possible. All enquiries should be addressed to Steve McLean, The Hancock Museum, Barras Bridge, Newcastle upon Tyne, NE2 4PT tel 0191 222 6765, fax 0191 222 6753, email s.g.mclean@ncl.ac.uk

Earth Science Education Forum Cymru launched

The inaugural meeting of ESEF – Cymru was held at the National Museum of Wales in Cardiff on 24 January 2006. Chaired by Professor Allan Rogers, the inaugural meeting was attended by around 60 stakeholders from around Wales, including a few from across the border. A presentation by Chris King, Director of the Earth Science Education Unit, was followed by a discussion of the way forward and how best to reach and engage teachers at all levels. The stakeholders meeting was followed by a lecture on climate change – past present and future by Professor Paul Pearson of Cardiff University, and the formal launch of ESEF – Cymru by the First Minister for Wales, Rhodri Morgan.

ESEF – Cymru is being formed to support Earth science education in Wales. It will be administered by Earth Science Education Forum for England and Wales and the National Museum of Wales. Its aim is to promote Earth science education by bringing together all relevant organisations. GCG is already a supporter of ESEF (England and Wales) and will also support the Forum's work in Wales.

Ireland's Natural History Museum: its future needs

The Royal Irish Academy has published a report on the Natural History Museum in Dublin. The Natural History Museum. Present status and future needs by Christopher Moriarty, Alan Myers, Tony Andrew, Tom Bolger, John Breen and Matthew Parkes highlights the inadequacy of the funding, staffing and space with which the museum has had to work for many years, how poorly it compares with other national natural history museums elsewhere, and outlines how the museum can be transformed into "a vibrant contemporary institution". It is full of praise for the staff of the museum recognising that the conditions under which they work "could drive lesser persons to a cynical disregard for their duties"! The report proposes a curatorial staff structure of a keeper, and seven curators, three of whom would cover geology. The full report can be downloaded at www.ria.ie/publications/reports/nhm.html

Diamonds aren't forever

If you were looking forward to seeing the *Diamonds* exhibition at the Natural History Museum in South Kensington over the festive season, you will have been disappointed. The exhibition, which was due to run until 28 February 2006, closed suddenly on 23 November 2005. The closure was much covered in the national press as it was due to police receiving intelligence that a robbery was imminent.

It was suggested that this might take place when the museum was open to the public, so the exhibition had to come to a premature end.

You can always put the nine quid you've saved on the admission charge towards the book of the exhibition or even a souvenir t-shirt or tiara from the on-line shop. If you want to see what you missed, a review of the exhibition was published in the September 2005 issue of *Museum Journal*, and in the January 2006 issue of *Geoscientist*. A report on the exhibition's closure can be found in the January 2006 issue of *Museums Journal*.

Wanted: Curator of Natural History (geologists need not apply)

At the January 2006 meeting of GCG Committee, some concern was expressed that there seems to be some misunderstanding of the terms 'natural history' or 'natural science' and whether geology is included under these headings. This is not mere pedantry, because it appears that in some places geologists seem not to have been considered for museum natural history posts, because they are not considered to be natural scientists. Comments have been made at several highlevel meetings that museums in general are having a hard time recruiting natural scientists (or "suitable" candidates). This has resulted in posts being deleted or redefined. GCG Recorder, Helen Fothergill, was charged with finding out more, and you may already have seen her email sent round on the Geocurators listserver. She wants to know about recently advertised posts for natural scientists in museums (biology, botany and geology).

Have you, or your organisation advertised such a post in the past 2-3 years?

What was the post?

What sort of qualifications did you expect? (BSc / MSc / Museum Qualification / AMA?)

How many applicants did you have?

What sort of backgrounds did they have (on average)?

Would you give as much/more/less weight to volunteer work/contract work/museum qualifications?

Any answers will be treated as confidential unless you state otherwise and will form part of a report and/or article on behalf of GCG. If you can help, please contact Helen Fothergill: GCG Recorder, *Keeper of Natural History*, Plymouth City Museum & Art Gallery, Drake Circus, Plymouth, Devon, PL4 8AJ tel 01752 304774 fax 01752 304775 email https://doi.org/10.1007/jebs.com/helen.fothergill@plymouth.gov.uk

Local heroes

Next year, 2007, sees the bicentenary of the Geological Society of London, and in 2008, the Geologists' Association will be celebrating its 150th anniversary. Both societies are combining in a joint celebration over the two years, and are planning a programme of outreach, based around the idea of local heroes. Museums and geology curators can play an important role in such a programme. Not only are we experienced in interpreting geology to the public, but we have the collections and the local knowledge to bring the subject alive. The two societies would like to put together a national programme to celebrate 200 years of geology in Britain,

and the contributions made by British geologists over that period to our knowledge of the Earth. The Geological Society expects to be able to make a financial contribution to the cost of each event.

For more information, and ideas, go to the Society's homepage www.geolsoc.org.uk and click on bicentennial homepage.

GCG Seminar, Field Trip and 32nd AGM

5-6 December 2005, University of Worcester

When I saw that the title of this meeting (Geoparks and Geodiversity Action Plans: a new look at GeoConservation) included one of those strange words with a capital letter in the middle, I knew we must be in for something special! And, the 32 delegates were not disappointed. The pre-conference notes posed the question, "where do museums and collections fit into the geodiversity strategy", and promised to explore how museums could play an active role in these initiatives.

After a welcome coffee and very large Danish pastry we settled down to the keynote address by Cheryl Jones, Director of the Abberley and Malvern Hills Geopark, who was talking on 'Sustainable Geotourism in the AMHG'. (Work it out for yourselves – this was to be a day of abbreviations and acronyms!). Cheryl began with a useful explanation of how the Geoparks initiative had been born in Beijing in 1996; that the European Geoparks network was established in Greece in 2000; that UNESCO and EGN had signed an agreement in 2001; that UNESCO Global Geoparks were established in 2004; and that now, in 2005, there were some 25 European geoparks, and 12 Chinese geoparks, with other countries, such as the USA, Australia, Mexico, Russia and Iran *et al.* showing interest.

Cheryl explained that geopark territory must include geological heritage and a sustainable territorial development strategy. The AMHG is based on the Malvern axis of Precambrian rocks, but with areas of Jurassic and Quaternary also included, and the inclusive management structure comprised the University of Worcester, English Nature, the Forestry Commission, Gloucester Geoconservation Trust, Shropshire Geological Society, Hereford & Worcester Earth Heritage Trust and Abberley Hills Preservation Society. The main objectives included geoconservation, education and geotourism and these were met by tapping into the 'green' tourism industry, which we were intrigued to learn seems to be dominated by the 35+ age group of 'empty nesters', 'DINKs' and 'SKI's' (Oh, all right, I'll help you – its 'Double Income No Kids' and 'Spending the Kids Inheritance'!!!). So, if your parents tell you they're going skiing in the Malverns, you know you're in trouble... Apparently 125 million tourists visit the West Midlands annually, but only 50 million visit the 4 counties.

Next up was the lively showman, Chris Woodley-Stewart, Director of the North Pennines Geopark, who was talking, aptly enough, on 'Geoparks and Geotourism in the North Pennines'. Chris began by explaining that the North Pennines AONB (that's Area of Outstanding National Beauty, as if you didn't already know) was designated in 1988 and was the second largest in the UK (United Kingdom – oh, so you knew that one...). It includes parts of 3 counties (Durham, Northumberland and Cumbria) and 6 districts, including the beautiful wilderness areas of Upper Teesdale and Cross Fell etc. Chris enthused about the wildlife, historical heritage, cultural tradition and outdoor pursuits that this lovely area has to offer, sufficient reason to explain why the North Pennines AONB was the first UK geopark, and one of the 25 UNESCO sites.

Chris described numerous major initiatives currently going on in the park, including, 'Rockworks' (a 4-year £600,000 project to interpret 25 sites, initiate 25 geotours and 36 rock walks, produce new publications, training events and local site guides); 'Rock Detectives' (a children's educational programme); 'Peatscapes' (conserving and researching blanket bogs); 'Wake Up to Wildlife' (a network of farmhouse accommodation with significant wildlife); and other activities such as working with Kilhope Lead Mining Museum and Nenthead Museum, rock-climbing tours, guided walks, lectures and films etc. Finally Chris talked about the Park's support of sustainable collecting of geological material, but their disapproval of collecting from abandoned mines, which, of course, is a source of much research material to museums.

Jon Radley, of Warwickshire Museum, spoke next on 'Geoconservation in Warwickshire', explaining that much of the territory of Lower and Middle Jurassic (plus the older rocks of the Warwick coalfield and the Precambrian outliers) consisted of lowland topography dominated by man-made exposures, such as quarries and other temporary exposures, which often had problems of access and of conservation (or even preservation). Jon described the partnership between Warwick Museum and Warwick Geological Conservation Group (known as the Warwick GCG!) with the twin aims of the protection of sites and education (both utilising the museum's assets). In 2001-2 the DETR had funded RIGS recording; in 2003-4 ALSF had funded RIGS management; in 2002-4 EN had funded Warwick Museum to pilot an LGAP scheme; and in 2004-5 ALSF funding had contributed to the Wood Farm Conservation scheme. (7 acronyms in one sentence...anyone get them all? The only one I'm going to help you with is 'LGAP' because that is very important. It is a Local Geodiversity Action Plan...see later.)

Jon described the present state of the partnership as having 1800 site records, 20 SSSIs, various ALSF funded projects and a Warwickshire LGAP. Future challenges include funding, site conservation, site identification, changing legislation, loss of some quarries, and integration with biological conservation. In summary, it is important to remember that the Museum provides the focal point for all these activities – for geoconservation, for RIGS, for site recording but, most importantly to my mind, for collections.

After a tasty lunch, we reconvened to listen to Brian Young, of BGS (now you ALL know that one...), talking on 'Making sense of geodiversity in northern England'. Brian was at pains to explain that geodiversity was not synonymous with geoconservation, and went on to describe the BGS experience of geodiversity studies in the three overlapping areas of the Northern Pennines, Co. Durham and Northumberland National Park, the first two of which had now been published, while the third was ongoing. Brian explained how different partnerships had been established for each of these, the first having AONB partners, the second being BGS and MIRO (oh, come on...its Mineral Industry Research Organisation of course...), and the third being with the National Park itself.

Using this considerable BGS experience Brian persuaded us to do things in the correct order, first to establish partnerships, second to undertake a geodiversity audit, third to prepare the all-important LGAP (told you it was important), and finally to implement the plan. The audit is vital - it is no good having an action plan if you don't know what heritage assets you have got to plan for!

Finally, Brian stressed the importance of considering the local, regional and national context in developing the plan. (For example, it is not worth preserving X in your territory, if there is a much better example of X in the adjacent territory.)

Next was the turn of Andrew Haycock of National Museum Wales (formerly the National Museum of Wales), spoke on 'The Rhondda Cynon Taff Earth Science Audit: a geoconservation strategy and its application to museums'. In 2003 Rhondda Cynon Taff commissioned an audit of mainly Westphalian geological sites in a joint project between Cardiff University and the NMW to introduce a transparent method of site assessment. Andrew described the database designed for this project where all sites were scored according to a variety of factors. Some 565 sites were considered, 90% of which were visited, and 44 of which met the minimum required geoconservation score. Results have confirmed 6 current SSSIs, 18 potential RIGS and 20 with SING potential (sorry, I have no idea what this one means...). Finally, Andrew explained that all the sites had been placed on a GIS system which will be very useful for planning and development and can also be used for trail guides, geotourism, online resources for schools and museums etc.

Top of the bill was Richard Edmonds, Earth Science Manager of the Dorset and East Devon Coast World Heritage Site, talking on 'Sustainable site-based management of collecting pressure on palaeontological sites'. This emotive subject has been near to the hearts of GCG (that's the Geological Curators' Group...) for some years and I was delighted at last to hear of a 'common sense' approach to the issue. His starting point was to outline the conservation objectives which are to make material available for study (*in situ* if possible), and for scientifically important specimens to be registered in museum collections.

Richard stressed the importance of understanding the nature of the site and its palaeontological interest, and warned that we should be mindful of the implications and effectiveness of any chosen approach. Three options were proposed: for restricted, finite sites (eg a small cave deposit of Pleistocene mammal bones) he suggested a 'Controlled Collecting Policy' with very restricted access. Secondly, sites such as working quarries where much material would otherwise be crushed for aggregate, he suggested an 'Open Managed Collection Policy", where collecting was allowed, but under supervision. And finally, for extensive coastal sites (such as the 150 km long Dorset and East Devon coast), which are continually being re-exposed after every storm, he proposed an 'Open Collecting Policy'. This, after all, would be the only sensible option for such sites – clearly policing them would be impossible and/or prohibitively expensive, and anyway new material is always available; however, he did recommend setting up a Code of Conduct for such collecting.

Choice of option depends on the answers to several questions such as: is there collecting pressure? Is the site finite or a temporary exposure? Are fossils common or rare? What is the process of exposure? What is the window of opportunity? How much material is required? What is the nature of the access and can it be controlled? What is the ownership situation? Are museum resources available? Are the necessary collecting skills available?

It would perhaps have been useful to have had some time for discussion of the day's events, but hopefully the talks will appear in a future issue of *Geological Curator* where they can inform any future GCG policies on these issues.

Next on the Agenda was the 32nd AGM where business was executed swiftly by Chairman, Mandy Edwards (note, she is not a Chair!) and the new committee was elected as usual without the inconvenience of a vote.

Those of us who were staying for Tuesday's field trip finished the day in fine style with a curry at the Anarkali Tandoori followed by a nightcap at the Saracen's Head. Christmas had truly begun!

A civilised start next morning saw us meeting at the University of Worcester where Dr Peter Oliver and colleagues were to lead our field trip into the Malvern Hills. First stop was Gullet Quarry, one of the many quarries to open in the Malvern Hills in the last century and which continued to operate until 1973. By the edge of the quarry lake we were able to examine Precambrian metamorphosed sediments (gneiss and schists) intruded by red pegmatites, all part of the ancient Avalonian landmass, which at the time was close to the South Pole. These rocks are approximately 680 Ma and formed during subduction of oceanic lithosphere and accretion onto the large southern super-continent of Gondwanaland during the late Precambrian.

A short detour led us up to a small exposure in the woods where we were able to examine the basal Cambrian amongst the leaf-litter. The exposures in the surface of the adjacent path can apparently reveal the approximate point of the Precambrian-Cambrian contact so we spent a merry few minutes scrabbling in the mud for this before returning to the quarry.

Climbing to the top of the quarry we began to see Silurian sediments resting unconformably on the Precambrian and we enthusiastically collected brachiopods and solitary corals. We then walked north along the main Malvern Ridge which is a north-south trending monocline, some 13 km long. The main summits of the northern end of the ridge include Worcestershire Beacon and North Hill (425m), with Herefordshire Beacon at the southern end. Climbing to the top of this we stopped at Clutters Cave, an ancient shepherd's shelter within volcanic rocks of the Warren House Formation. These fine-grained igneous rocks have been dated at 566 Ma (Uriconian), similar to the volcanic rocks of Shropshire of the same age, and have been interpreted as pillow basalts extruded in deep water (lack of vesicles) in a back-arc basin at the bottom of the Iapetus Ocean to the north of Avalonia.

On the top of Herefordshire Beacon is British Camp, an Iron Age hillfort, which was admired by the more studious members of the party while others hurried north to locality 3, the Malvern Hills Hotel, where a welcome lunch awaited us. Back to the University of Worcester by four o'clock, we dispersed for Christmas after yet another excellent GCG meeting. We extend our grateful thanks to all involved in its organisation, especially Steve McLean, Cheryl Jones and Peter Oliver.

John Nudds, University of Manchester

Forthcoming GCG seminars and workshops

Thursday 18 May 2006 University of Manchester, School of Earth, Atmospheric and Environmental Sciences, Williamson Building, Oxford Road, Manchester

GCG Seminar: Dangerous minerals

This meeting will review current best practice procedures for identifying and dealing with some of the classes of dangerous minerals commonly found in museum collections – these will include the asbestos group of minerals as well as radioactive species. Contributions from leading academics, curators and health

and safety officers will allow participants to build up an up to date picture of how to manage the dangerous minerals in their collections.

1100 Welcome

1105 The mineralogy of dangerous minerals: Giles Droop (Manchester University)

1140 Radioactive minerals in the museum: Sara Chambers (Truro Museum)

1225 Asbestiform minerals in the museum: speaker to be confirmed

1300 Lunch (provided by the University) with an opportunity to view displays of current museum practice and published documents

1400 Workshop 1: The identification of dangerous minerals and the recognition of species likely to be found in museum collections

1500 Workshop 2: Good management practices for mineralogy collections including policies for the management of radioactive and asbestiform minerals

1600 Final roundup of the day

Meeting fee: £10.00

Please complete the booking form on page 15, and return it, with payment (cheques payable to GCG) by 10 May to Mandy Edwards, Curator and Learning Resource Manager, School of Earth, Atmospheric and Environmental Sciences, University of Manchester, Manchester M13 9PL tel 0161 275 3825 fax 0161 275 3947

Wednesday 14 June 2006 National Museum of Wales, Cardiff

GCG Workshop: The curation and conservation of rock collections

NOTE: CHANGE OF DATE

This one day workshop will cover basic identification, terminology, storage and conservation of rock collections, including useful resources on the web and in the literature. Each session will include a practical element, and handouts for future reference.

1000 Arrive and coffee

1030 Introduction

1045 Igneous rocks

1130 Metamorphic rocks

1215 Storage and tourstores

1300 Lunch (provided)

1345rocks

1500 Tea

1515and conservation

1600 Opportunities for further discussion or leave

Meeting fee: £10.00 (including coffee, tea, and lunch)

Please complete the booking form on page 15 and return it, with payment (cheques payable to GCG) by 7 June to Helen Kerbey, Department of Geology, National Museum of Wales, Cathays Park, Cardiff CF10 3NP tel 029 2057 3367 email helen.kerbey@museumwales.ac.uk

11 October 2006 World Museum Liverpool.

GCG Workshop: Geological archives

Practical workshop looking at some of the techniques used to conserve and store a variety of archive materials including modern documents, books, maps and prints, and photographs and slide collections.

Contact: Tony Morgan, Natural History Centre, World Museum Liverpool, William Brown Street, Liverpool, L3 8EN tel 0151 478 4286 fax 0151 478 4390 email tony.morgan@liverpoolmuseums.org.uk

9-11 November 2006 World Museum Liverpool, Manchester Museum and Manchester University

GCG Study Visit

This year we have decided to undertake our study visit on home soil with the hope that this will encourage some more of you to sample what is on offer. There is great value in studying institutions in some detail with respect to their current practices and future direction in both collections management and public programmes, and we hope to continue this process throughout the UK as well as overseas. This year we are visiting World Museum Liverpool not only to look at recent redevelopments there but to have a good look around the facilities and collections and to meet staff. We will also visit the Manchester Museum and the School of Earth, Atmospheric and Environmental Science at Manchester University. There will be an optional fieldtrip on Saturday 11 November.

A full programme will appear in the next edition of Coprolite. To register your interest, please contact: Steve McLean, The Hancock Museum, Barras Bridge, Newcastle upon Tyne NE2 4PT tel 0191 222 6765 fax 0191 222 6753 email s.g.mclean@ncl.ac.uk

4-5 December 2006 City Museum & Art Gallery, Plymouth, Devon

GCG Seminar and 33rd AGM: Learning with geology collections

One of the current buzzwords: *Learning* underpins the purpose of geological collections whether we like it or not. It may encompass school children digging up fossils and making plasticine volcanoes, a researcher re-assessing type specimens for a new treatise, an exciting and informative gallery or a systematic collection

representing early scientific thought. Education in all its forms can be indirect or formal; traditional or new; exciting and innovative or methodical and personal.

The theme of this meeting will allow us to re-explore some of the old favourites we've been doing for years (but re-branded to fit new and popular directives) plus truly new and innovative approaches that might inspire you to re-examine the potential of your rocks. The meeting will be aimed at geological curators, education officers and non-specialist curators with responsibility for geological material.

Contact: Helen Fothergill, Keeper of Natural History, Plymouth City Museum & Art Gallery, Drake Circus, Plymouth, Devon, PL4 8AJ tel 01752 304774 fax 01752 304775 email helen.fothergill@plymouth.gov.uk

Other meetings

13 April 2006 Geological Society, Burlington House

History of Geology Group Open Meeting

A varied day of talks on a wide range of topics in the history of geology. The keynote address, '19th Century Debates on Geological Uniformity and the Age of the Earth', will be given by Professor Leonard Wilson, emeritus professor of the University of Minnesota and a leading authority on the work of Charles Lyell.

to view the full programme, go to: www.geolsoc.org.uk/template.cfm?name=HOGG Open Meeting Thursday 13th April 2006

Contact: Anthony Brook anthony.brook2@btinternet.com

4-8 September 2006 The Staätliches Museum für Naturkunde, Karlsruhe, Germany. The Sauropterygia: The first European Association of Vertebrate Palaeontology Themed Symposium.

Sauropterygian palaeontology, including preparation, conservation, display, etc.

Contact: Dr Leslie Noè, The Sedgwick Museum, Downing Street, Cambridge. e-mail lnoe01@esc.cam.ac.uk or see www.http://eavp.alettra.de/

24-25 November 2006 Dudley

History of Geology Group and GeoConservation Commission: History of Geoconservation

Through presentations and field visits, this conference will explore the themes of :

- 1. The origin of geoconservation (sites, landscapes, specimens, documents, art) when can it be argued that it first started?
- 2. The history of more formalised geoconservation in the British Isles (the efforts of government, academia, voluntary groups, societies and associations)

- 3. the history of international initiatives that have made an impact in the British Isles (World Heritage Sites, Geoparks etc)
- 4. A brief look at the current and potential role of geoconservation in contributing to social and economic well-being. In other words how will society benefit from geoconservation in the future? It is anticipated that the proceedings of the conference will be published by the Geological Society.

To offer a paper contact Cynthia Burek cburek@chester.ac.uk or Colin Prosser colin.prosser@english-nature.org.uk , or to offer a poster or register interest in receiving further details, please contact Hannah Townley at hannah.townley@english-nature.org.uk or 01733 455304.