

DROPPINGS
FROM THE
GEOLOGICAL
CURATORS
GROUP

Coprolite is compiled and produced by Helen Kerbey, Department of Geology, National Museum of Wales, Cardiff CF10 3NP (e-mail Helen.Kerbey@museumwales.ac.uk, tel +44 (0)29 20 573367). It is published three times a year in March, June and November. Any material for inclusion should be sent to Helen Kerbey by the first of the previous month, i.e. by 1 February, 1 May or 1 October.

Chairman: Mike Howe, British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham NG12 5GG Tel: 0115 9363105 Fax: 0115 936 3200 Email mhowe@bgs.ac.uk

Secretary: Helen Kerbey, Research Assistant, National Museum of Wales, Cathays Park, Cardiff F64 4DL Tel 02920 573367 Email helen.kerbey@museumwales.ac.uk

Treasurer: John Nudds, School of Earth, Atmospheric and Environmental Sciences, The University of Manchester, Oxford Road, Manchester, M13 9PL Tel 0161 275 7861 Email: john.nudds@manchester.ac.uk

GCG website: <http://www.geocurator.org>

2012 subscriptions

Subscriptions were due on 1 January 2012. You should have received your personal subscription invoices by now. Please send your payments back to me as soon as you can as it makes my life a lot easier if I don't have to send out further reminders. If you pay by Standing Order, please check that you are paying the new amount (£15 UK or £18 overseas). There are still several people who have not done this - you will be invoiced for the difference - and for the amount you owe from last year as well. Subscriptions unpaid by 1 April 2012 will be deemed to have lapsed. This year we have introduced a new optional rate of £10 for unwaged members to encourage people such as students to join and to enable those no longer in employment to remain members.

Please send any subscription enquires or fees to Cindy Howells, Department of Geology, National Museum of Wales, Cathays Park, Cardiff, CF10 3NP email cindy.howells@museumwales.ac.uk

New Members

GCG is pleased to welcome the following new members: **Pete Reser**, Albuquerque, New Mexico, USA; **Simon Jackson**, Kent; **Lu Alington-Jones**, Natural History Museum; **Chris Moore**, Fossil preparator and dealer from Charmouth, Dorset; **Pedro Viegas**, Fossil Preparator for the Bristol Dinosaur Project; **Jens Lehmann**, Head of Geosciences Collection, University of Bremen; **Ben Johnson**, Logger and Site Engineer, Cumbria; **Stephen Callaghan**, Volunteer, National Museum of Ireland, Dublin; **Wayne Itano**, Museum of Natural History, University of Colorado, Boulder, USA; **Jim Spencer**, Manchester.

John Arum

Members will be saddened to hear of the death of John Arum, a member since 1998. John was a retired geologist who will be known to many from Lincolnshire & Yorkshire where he lead field trips and wrote numerous articles about the local geology.

Musical Curators

Paul Smith is now Director of Oxford University Museum of Natural History.

Ken McNamara is now the Director of Sedgwick Museum.

Leslie Noè has left Birmingham to become Assistant Professor at the University of the Andes, Bogota, Columbia.

Chairman's Report - 38th Annual General Meeting of the Geological Curators' Group

2011 has been an unusual and difficult year by any standards, eerily foretold by the Belfast Annual General Meeting that never was. Kenneth James, Curator (Geology) at the Ulster Museum was the local host for an excellent and somewhat controversial seminar entitled "The New Ulster Museum: record visitor figures, awards and vanishing curators". The Ulster Museum had reopened in October 2009, following a three year closure and a £17.2m redevelopment. Since then it had attracted 600,000 visitors and won several awards, including the £100,000 Art Fund Prize for museums and galleries. However, the curators had been moved to offices 9 miles from the museum, the collections had been moved to an industrial estate 6 miles from the curators, and the number of curators continued to shrink to 'endangered species' level, whilst management positions multiplied. The general belief was that the Museum would never again be able to redevelop its displays in such a way because it had lost the necessary curatorial knowledge of its collections. At the May committee meeting we agreed to support Earth Science 2000's attempts to raise this as a concern.

Sadly heavy snow kept many of those registered away, and my election as Chairman was null and void when it was realised that the meeting had not been quorate. Fortunately, a good number of committee and members made a reconvened AGM at the Geological Society premises in London on 19th January, and the AGM business was conducted uneventfully.

1. Museum cuts

During the year, museum cuts came fast and frequent, with Hampshire, Maidstone, Norfolk, Liverpool and Warwick amongst the many loosing posts. This was not restricted to the UK, with posts in the USA going, including the New York State Paleontologist, a post that had been in existence for more than 170 years. I find it a matter of grave concern that previous generations considered museums and public education of such importance that, even though resources were much more limited than they are today, they still considered such expenditure essential, yet in today's relatively affluent society, they are not considered important. Against this background, I am not sure that writing letters of concern to local councils will make any difference, and I believe we need to look for more productive approaches.

2. New working groups

At the January AGM/EGM/Committee meeting I outlined my intention to establish three working parties:

Development of a strategy to responding to proposed cuts.

Publicising success stories from museums, raising the good news profile 'Citizen Science' projects, bringing amateurs on board.

Unfortunately, time pressure on members and the committee has delayed progress on these. The cuts have made it harder for many committee members to devote so much of their time to GCG, and we have been experimenting with Google Documents in an attempt to work "smarter".

3. International and national scientific databases

One optimistic development has been a growing interest in international access to earth science collections through such initiatives as "The International Sample Numbering System". There has also been a growing realisation that individual specimens or collections will benefit from URIs or 'Uniform Resource Identifiers'. These are permanent, unchanging specimen identifiers. We already almost have them with sample registration numbers and MDI codes, but they need to link the web directly to the specimen, or at least a metadata entry and probably an image or even a digital model. Using these will enable research papers to cite actual specimens in a machine readable manner, and it will then become a relatively trivial database matter to automatically assemble a list of citations, reuses or references for any specimen. As a means of highlighting the importance and significance of the specimens we care for, this must be second to none. Exporting sample information to databases such as that funded through the JISC project in which GCG is a partner will be a simple way to benefit from this.

4. The Committee

Finally, I should like to thank the Committee for all their hard work over the past year. At the January meeting, Helen Kerbey bravely volunteered to help and was shortly afterwards co-opted as Secretary, when David Gelsthorpe resigned through pressure of work. I should like to thank David for his contributions over the past few years, and Helen for stepping in at short notice. I should also like to thank all

the other committee members ' including Steve McLean, the programme secretary; John Nudds, Treasurer; Tony Morgan, minutes secretary; Matthew Parkes, journal editor and Guidelines project manager; David Craven, newsletter editor; and the other committee members, Mark Evans, Jeff Liston, Jon Radley and Owen Green. I should like to thank the co-opted members to, including the webmaster, Hannah Chalk; the membership Secretary, Cindy Howells; the ICON representative, Adrian Doyle; the NatSCA representative, until he stepped down on taking up a post in South America, Leslie Noé; and of course Tom Sharpe, who has been looking after the arrangements for bringing the constitution up-to-date. Mike Howe.

Exhibitions 2012

2012 is the 100th anniversary of Captain Scott's ill-fated journey to the South Pole. Scott was keen to make the trip a scientific one and collected many zoological and geological specimens during the attempt, many of which are held in UK museums.

Scott's Last Expedition: Natural History Museum 20 January - 2 September

Captain Scott Exhibition: National Library Of Scotland 12 January to 25 March

These rough notes: Captain Scott's last expedition: Polar Research Institute, Cambridge 7 December 2011 - 5 May 2012

Scott, Shackleton and Antarctic Photography: The Queen's Gallery, Buckingham Palace 21 October 2011 - 15 April 2012

Captain Scott: South for Science: National Museum Wales, Cathays Park, Cardiff 14 January–13 May 2012

Rock Solid? Expo. Kendal Museum, 24th March to 16th June 2012

Kendal Museum will be holding an exhibition of specially created artworks based on Lakeland Geology.

The Manchester Plesiosaur

I am delighted to report that the Manchester Plesiosaur will be remaining on display in the Fossils Galley of Manchester University Museum. This well-known specimen was collected in the 1960s by Manchester's Fred Broadhurst, whilst on a field trip to the Yorkshire coast with a party of undergraduates. It was on display in the Geology Department of the University until about 1990, when it was transferred on loan to Manchester Museum, and formed the centre-piece of the new lottery-funded Fossils Gallery which opened in June 2000. Three years ago 'Percy', as the specimen is fondly known, came under threat of eviction from the gallery since deficiencies in the display case were leaving him exposed to the possibility of pyrite decay. A campaign of awareness was initiated, followed by a fund-raising appeal by the Broadhurst family, who raised sufficient funds for a new, climatically controlled case, to ensure that this fine specimen, one of the best to be collected in the 20th century, remains on public view as a memorial to Fred who sadly died in 2009. In 2011 the specimen was described as the holotype of a new species of *Hauffiosaurus* by Leslie Noe and colleagues.

John Nudds, Manchester

Fossil, mineral and gem shows 2012

3-4 March	Copthorne Hotel, Dudley. Rock & Gem Show
4 March	Oxford Mineral Fossil Show Exeter Hall, Kidlington, Oxon, OX5 1AB
10-11 March	Kempton Park Racecourse, London. Rock & Gem Show
24-25 March	Cheltenham Racecourse, Cheltenham. Rock & Gem Show
31 Mar-1 Apr	Brighton Racecourse. Brighton. Rock & Gem Show
21-22 April	Newark Showground Newark. Rock & Gem Show
12-13 April	Manchester Manchester. Rock & Gem Show
5th May	The Clarke Foley Centre, Ilkley, Yorkshire, LS29 9DZ British Lapidary & Mineral Dealers Association
9-10 June	Kempton Park Racecourse, London. Rock & Gem Show
16-17 June	Bath and West Showground, Shepton Mallet. Rock & Gem Show
7-8 July	Newcastle Racecourse, Newcastle Upon Tyne. Rock & Gem Show

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

GCG Committee 2012

Chairman: Mike Howe, British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham NG12 5GG (tel 0115 9363105 fax 0115 936 3200 email mhowe@bgs.ac.uk).

Secretary: Helen Kerbey, Research Assistant, National Museum of Wales, Cathays Park, Cardiff F64 4DL (tel 029 20573367 email helen.kerbey@museumwales.ac.uk).

Treasurer: John Nudds, Senior Lecturer in Palaeontology, School of Earth, Atmospheric and Environmental Sciences, The University of Manchester, Oxford Road, Manchester, M13 9PL (tel 0161 275 7861 email john.nudds@manchester.ac.uk).

Programme Secretary: Jeff Liston, Department of Natural Sciences, National Museum of Scotland, Old Town, Edinburgh, EH1 1JF (email: glzjl@bristol.ac.uk).

Minutes secretary: Tony Morgan, Geologist, Clore 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).

Recorder: Mike Howe, British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham NG12 5GG (tel 0115 936 3105 fax 0115 936 3200 email mhowe@bgs.ac.uk).

Editor- Journal: Matthew Parkes, Natural History Museum, Merrion Street, Dublin 2, Ireland (tel +353 (0)87 122 1967 email mparkes@museum.ie).

Editor-Coprolite: Helen Kerbey, Research Assistant, National Museum of Wales, Cathays Park, Cardiff F64 4DL (tel 029 20573367 email helen.kerbey@museumwales.ac.uk).

Committee Members:

Owen Green, Department of Earth Sciences, University of Oxford, Parks Road, Oxford OX1 3PR (tel 01865 2724904; email owing@earth.ox.ac.uk).

Jon Radley, Warwickshire Museum, Market place, Warwick CV34 4SA and school of Geography, Earth and Environmental Sciences, University of Birmingham, Birmingham B15 2TT (email jonradley@warwickshire.gov.uk).

Giles Miller, Senior Curator, Palaeontology Department, Natural History Museum, Cromwell Road, London SW75BD.

Steve McClean 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.

Co-opted Members:

Hannah Chalk, School of Earth, Atmospheric and Environmental Sciences, University of Manchester, Manchester M13 9PL tel 0795 6208704 email hannah-lee.chalk@manchester.ac.uk.

Cindy Howells, Department of Geology, National Museum of Wales, Cathays Park, Cardiff, CF10 3NP tel 02920 573354 fax 029 20 667332 email cindy.howells@museumwales.ac.uk.

Tom Sharpe, Department of Geology, National Museum of Wales, Cathays Park, Cardiff, CF10 3NP tel 02920 573265 fax 029 20 667332 email tom.sharpe@museumwales.ac.uk.

Meeting reports

Joint GCG/ SPPC meeting at Lyme Regis, 12th – 17th Sept 2011

This year, 2011, GCG joined forces with the *Symposium for Palaeontological Preparation and Curation* for the first time. Their annual September meeting usually visits various universities and museums along with the associated *Symposium of Vertebrate Palaeontology and Comparative Anatomy*, but this year was held at Lyme Regis in order to mark the 200th anniversary of the finding of the first complete ichthyosaur skeleton by Mary Anning and her brother.

The SPPC/GCG portion was held on Monday 12th September with two sessions covering various aspects of fossil preparation, conservation and also museology. Frank Osbaeck (Museernes Bevaringscenter i Skive) spoke about the acid preparation of a well preserved Eocene pond turtle, then Mike Howe talked about the complexities of moving two major BGS collections to a new store. Another museum based talk was given by Philip Hadland who described the public engagement activities carried out within Canterbury Museum. Mark Evan gave us a view of his new geological galleries in the New Walk Museum, Leicester, including the marvellous computer generated animations of the Oxford Clay faunas. This was followed by Trine Sørensen and Martin Abrahamsson, Denmark, who spoke about extracting and then sectioning microfossils. The Bristol Dinosaur team, headed by preparator Pedro Viegas spoke about the microfaunas found within the bone breccia, and the session came to an end with Scott Moore-Fay who talked about his work preparing the huge skull of the Weymouth Bay pliosaur.

This interesting afternoon was just the start of a fascinating week of talks, posters, field trips and general networking. The next five days were all part of the SVPCA, and abstracts for all talks can be viewed at http://www.svPCA.org/years/2011_lyme_regis/abstracts.pdf. Each evening was given over to a public lecture from the likes of Mike

Benton, David Norman, Richard Edmonds, Richard Forrest and Mark Witton. Mid-week field trips were led along the coast in each direction from Lyme Regis, and then also on the Saturday, delegates had the choice of a trip to the Triassic of south Devon, or to see the stunning Kimmeridgian fossils collected by Steve Etches in east Dorset. Social events included the annual auction in aid of the Jones-Fenleigh Fund to aid student participation, also evening receptions at Lyme Regis Museum (to see the Anning ichthyosaur skull borrowed from the NHM) and the Dorchester Museum to see the finished and mounted Weymouth Bay pliosaur skull.

This was an action packed week in a fabulous venue, with barely enough time free even to eat on most days. Organisation by Richard Forrest, aided by Richard Edmonds and a few others was excellent and provided an experience never to be bettered I fear!

Cindy Howells, National Museum Wales

Dinosaur Interpretation for a non-specialist audience – World Museum, Liverpool 2nd December 2011

This seminar was aimed at bringing together both geologists and non-geologists, to talk about and showcase dinosaurs, and the new ways that are being designed to bring them to life for the next generation.

Around 60 delegates gathered in the World Museum, Liverpool to be welcomed by Phil Phillips (New Media Development Manager), and Steve Judd (Director). The first talk was given by Alan Bowden (Curator of Earth Sciences, World Museum), who spoke about the famous *Chirotherium* footprints, giving the history of their early discovery and various accurate and inaccurate representations of the animal. This led to various reconstructions of its environment, many of which depicted it living in traditional desert sands, although some German interpretations had suggested more vegetated conditions. Of course the problem with bare dunes is the lack of food stuffs, so recent fieldwork has concentrated on finding plant fossils. Now it is possible to reconstruct the Mid-Triassic 'deserts' with marine incursions and seasonal water courses, bounded by riparian corridors populated by conifers, lycopods, horsetails, bryophytes, ferns etc. All these would probably have been low growing, but plentiful enough to provide food for a complete ecosystem.

The next speaker was Scott Wright, from Erth Visual and Physical, Australia, who has turned a childhood liking for building papier-mache dinosaurs into a prospering business in animatronics and puppetry. Initially he concentrated on Australasian faunas, and developed a series of puppet dinosaurs which engaged with the public, and with each other. These proved a great draw despite many galleries being closed for renovation. Invited by Luis Chiappe to work his magic in L.A., he developed a programme for the USA market and the business has continued to grow. They spend about 3 months on each new puppet and every one is unique. Lighter materials now make them easier to handle, although Scott prefers to use trained dancers as puppeteers as they have a better understanding of movement, and awareness of their body position, as well as greater fitness and

agility. If you are in any doubts about the realism of these creatures just check out some of the many You-Tube clips. Its amazing how quickly children stop seeing the human legs underneath and react as though the dinosaur was real. The costs for hiring one of the puppets for a short period don't seem too exorbitant either, when one considers that every extra visitor attracted spends a certain amount in both shop and café. The juvenile *Tyrannosaurus* prowling the Liverpool Museum this weekend was both realistic and very popular with adults and children alike, and would be a great draw to any museum. Quadrupeds such as *Triceratops* are also on offer, or you could splash out and commission something unique! Their latest project in New Jersey is to take an overgrown parcel of 26 acres and turn it into an animatronic dinosaur park along the lines of Jurassic Park (but a little less dangerous), with puppet dinosaur feeding times and dino babies... Sounds wonderful!

A brief lunch break gave delegates a chance to meet the *Tyrannosaurus* puppet, and also to visit the animated *Age of Dinosaurs* exhibition.

Back to the UK after lunch, with a talk by Steve McLean (Great North Museum) about their developments at the Hancock Museum – now the much improved Great North Museum. GCG had a meeting to visit this fairly recently, so many will remember the excellent new galleries, with the lovely display of mounted vertebrate specimens leading through into the archaeology and geology galleries. He spoke about the *Tyrannosaurus* cast chosen to occupy a central position in the geology gallery, and justified getting such a 'common' dinosaur because of its immense pulling power – and indeed it has attracted large queues.

Nigel Paterson, series producer of the BBC's Planet Dinosaur, spoke about the difficulties faced in creating a successful series with a fraction of the budget and much less time than Walking with Dinosaurs had. Dinosaur discoveries have expanded globally since the first series, and they were keen to show as much of this as possible. First though, they had to research absolutely everything, in order to know what they needed to include. Concentrating on sets of species, their environment and their behaviour, they developed a series of storylines and planned the episodes. The eighteen months allowed from first research, to final filming, was not nearly as long as they'd have liked, but they're now looking again at the series with a view to redeveloping it in 3D.

From the academic world, Paul Barrett (NHM) then spoke. As one of the series advisors, he was mainly concerned with the accuracy of the dinosaur's movements and behaviour. By studying the muscle attachments on bones, studies have been carried out on the range of movements allowable and techniques have been borrowed from both medicine and engineering in order to model these as accurately as possible. Occasional spectacular fossil finds such as the famous fighting *Protoceratops* and *Velociraptor* from Mongolia, help with freezing moments in time. The work carried out scanning the braincase of the London *Archaeopteryx* specimen has showed that it had a relatively small brain and although powerful enough for flight control, it would not have been capable of any

fancy flying. Its range of hearing can also be predicted and thus an idea of the sounds it might have made. The most recent studies have been on the geochemistry of feathered Chinese dinosaurs and traces of actual pigments have been found proving various colours. Eventually we will even be able to answer the old question "but what colour were they really?".

Keith Feinstein (Eureka Exhibits) and Professor John Hutchinson (University of London) talked about a new computer simulation game (www.bethedinosaur.com) involving multiple users taking on a dinosaurian identity and interacting with each other and their environment. This late Cretaceous adventure, based on the American Hell Creek Formation, encourages children to explore a traditional exhibit, learning about the dinosaurs and their environment before taking on the persona of a dinosaur in the computer simulation. Up to 36 users can interact together in one scenario (although more are potentially possible given enough simulator pods and space). The scenery, plants and other animals are designed to be as realistic as possible (helped by a team of palaeontological advisors), and the dinosaurs are programmed to explore and react with each other, and all other elements of the two square miles of virtual landscape. Plants have accurate nutritional values, and virtual wind currents carry scents to be sniffed and identified. The usual length of a 'game' is about 7-10 minutes, unless the dinosaur is killed off quickly, and then the player is given ideas about how they could survive better next time by learning more. Settings can be altered to be more advanced or simplified, and users can enter and leave the scenario at any time. This certainly sounds like an appealing exhibition idea and I hope that it will run in a nearby UK museum soon because I want to try it!

This was followed by Professor Mike Benton (Bristol University) who spoke about the Bristol Dinosaur Project (www.thebristoldinosaurproject.org.uk). *Thecodontosaurus* was the fourth dinosaur to be named in the world, and was initially discovered in 1834 – before the name 'dinosaur' had even been invented. It was a small (2.5m long) semi-quadrupedal herbivore and its fossils are found in late Triassic fissures within the Carboniferous Limestone in the Bristol and South Wales areas. Although many of the early specimens were destroyed in the 1940 air-raid on Bristol, more have recently been uncovered in Tytherington Quarry by David Whiteside. HLF funding for the Project has enabled the employment of education officers to take some of the material out to schools and the community, and also a preparator to prepare the many tons of cave breccia excavated. Although the funding is not likely to be renewed in the future, there is still much more work to be done on the material and is hoped that the current supply of keen graduates and MSc students as volunteers will continue.

The last talk was a video link to Jen Bloom, Theatre Director of the Los Angeles Natural History Museum. Despite the (for her) early morning session, she gave us a great insight into the life size dinosaur puppets they have created in conjunction with Erth, the Australian based physical theatre company that Scott Wright spoke of earlier. The Los Angeles Museum has also commissioned a Sabre-tooth Cat more recently although this requires a particularly agile puppeteer inside. One of

Erth's successes in New Zealand was to launch an ongoing media campaign about two dryosaurs meeting within the museum, and then breeding offspring. This attracted audiences for two years.

This ended the day of talks although some lucky folks got to stay on into the evening and join in the fun and games at the public Dino-Night at the Museum. This involved more chances to meet the *Tyrannosaurus*, join in the dino-disco, take part in face-painting and gallery tours and listen to another Mike Benton talk about the Origin of Dinosaurs!

Cindy Howells

GCG Seminar & 38th AGM, Leeds Museum Discovery Centre, 6 – 7 December 2011

The title of the seminar was 'Managing Geology Collections and Data – current developments for future uses!' and attracted a good audience who were not deflected by weather induced travel problems like last year. Including the speakers about 30 people attended, so, unlike the 2010 Belfast meeting an AGM was held successfully at the end of day one.

Perhaps it was a false memory which made me think Leeds (like Chicago) might also have a 'Windy City' epithet but it certainly would have deserved one during our visit! The Discovery Centre, opened in 2007, is a fine facility located in an industrial redevelopment area a mile or so from the city centre and quite close to the Royal Armouries site. It proved an excellent base for a meeting and we were very well looked after by its staff. Camilla Nichol the Head of Collections welcomed us to Leeds, deputising for the Head of Service who was unable to attend.

Mel Whewell, Head of collections at Tyne and Wear Archives and Museums (TWAM) gave the first and well-polished presentation about the introduction of a new collections management system across their service. As a long-time Modes user myself I was curious to know why Tyne and Wear had abandoned its similarly long-term relationship with Modes and migrated their data to KE Emu. To be fair the speaker never actually named their previous system but, after introducing the diverse nature of their service and its activities, proceeded to make and justify the business case for the change. Citing usability problems managing five different collection groups and half a million object records in 150 separate databases across 12 sites, the speaker placed usability and support for both staff and public engagement as critical drivers for change. A range of shortcomings with their previous system were listed, some of which (such as lack of multi-user access) mystified me slightly at first. Later I realised that they had been using the earlier Modes for Windows software and had never upgraded to its industry standard XML-based derivative. Instead they chose to employ Prince 2 methodology to select a system which would meet all their requirements and crucially engage all the people required for a successful implementation. It has taken some three years to reach the point where the system is live and the data has been migrated, with some data cleaning still to be done.

From my external perspective I found myself wondering whether TWAM were actually any further forward with their collections management than they would have been if they had simply upgraded to ModesXML and conducted a very serious review of their procedures. All versions of Modes have always had term list and data validation facilities, for instance – though there was no compulsion about their use. However as Mell Whewell stated, the whole TWAM exercise was not just about software acquisition but more about involving a wider range of individual and corporate stakeholders with the whole process of collections management, together with improving access overall. The Emu has definitely arrived in the TWAM service and, if her feelings are widely shared, the speaker's clear enthusiasm for the project bodes well for its future there.

Jo Anderson, a Storage Project Co-ordinator from the Great North Museum Project (also part of TWAM) then spoke about their experience with trialling the use of RFID (Radio Frequency IDentification) tags in relation to a major collection 'decant'. This involved the integration of three major museum collections (400,000+ objects) and the creation of an off-site store and resource centre. The items were inventoried as around 10,000 records in Modes for Windows (before the arrival of the Emu!) and the RFID project sampled approximately 25% of these from 8 different collections. The speaker detailed the pros and cons of the system they used, together with the strengths and weaknesses of the hardware and software involved. There were issues of software compatibility, limitations on the levels of storage information which could be managed, together with hardware problems. The latter related both to the available RFID tags in the museum environment (size, adhesive effectiveness, detectability and long-term readability), together with reader issues (size, weight, battery life and sensitivity). Overall the conclusion was that the system had potential to be useful in operations such as major collection decants but only if software compatibility could be improved to avoid clunky data conversion processes with heavy user intervention. As trialled the RFID concept would not be helpful in general collections management.

Mike Hirst followed with a presentation intriguingly titled From Ignorance to Igneous – Geological Data Sources and Open Culture. This gave some fascinating insights into the possibilities which can be realised once accessible sources of collections data on the internet are combined with other publicly available data sets. He talked about Europeana and the Culture Grid as projects designed to make museum collections data widely available and the 'Hack Days' for web developers which had successfully generated some interesting project concepts. The statistics for Europeana are eye-watering – more than 20 million objects from 1500+ institutions in 32 countries! His presentation then homed in on TWAM mineral collection data available online and plotted onto Google Earth using geospatial locality data within the data. He then showed us other data sources and mapping data sets from BGS before turning to the activities of the Google Earth community. Although mining sites clearly are, some of these other data sets might not at first seem overly relevant to us. However, taking a plot of closed and disused UK railways he was then able to show a definite concordance with mineral specimen locations and branch lines which formerly served the mine sites. The

screen shots of web applications combining these data elements with the geo-spatial data as the 'glue' binding it all together made a convincing case for including such data in museum object records. The potential for this type of application was obvious and is clearly one of the drivers behind recent EC digitisation recommendations. These envisage increasing the number of objects available online through Europeana to 30 million by 2015 and calling on the UK to digitise 3.9 million objects over the next four years.

In the final session before lunch Jane McDonald of Edinburgh University considered Talking Objects: Tales of Things at the Museum. This experimental program involved using a mobile phone app to record peoples' stories about objects and QR codes to retrieve them. She described a case study of people leaving items at a charity shop and recording information about the objects to be retrieved by future owners. Parallel possibilities in a museum donation situation are obvious or recording reactions to objects in an exhibition from both real and virtual visitors. The trials were only judged partially successful as there is still limited understanding of QR codes. However the linked events were quite well attended, offering a useful marketing opportunity and particularly appealed to younger people. This was perhaps unsurprising and clearly there is future potential here, as the technology becomes better known. There is a project website – www.talesofthings.com.

After an excellent buffet lunch served in the meeting room Daniel Locket and his colleague from the Ludlow Museum Resource Centre recounted the trials and tribulations of merging two collections. These were historically part of two separate service, Shropshire (county) and Shrewsbury (town), about 300,000 items in total, of which about 40,000 were geological. The county items were at the modern Ludlow Museum Resource Centre but the Shrewsbury items were in the half-timbered Rowley's House Museum with awkward working conditions, particularly in the attic areas. The merge was necessary because Shrewsbury Museum is moving to a different site at the Music Hall which will have little storage space. There was also a desire to rationalise, cutting down on costs by avoiding leased buildings. The advantages and disadvantages of this strategy were reviewed. Advantages included bringing all material up to the same standard of storage and documentation, increasing the comprehensiveness of the collection, possibly re-uniting related material and having the material in the same place as the natural history staff. Disadvantages included potential damage during handling or transport, potential for data loss relating to provenance or context and the removal of the collection away from its point of origin. Future re-use would inevitably involve further transport. A merge strategy was drawn up, including volume assessments of the collection and destination store. Work spaces and materials requirements were assessed; documentation procedures for inventory production and the move itself were drawn up. Conservation requirements were also considered, together with budget implications, the need to recruit volunteers and identify work hazards or potential problems. The speakers clearly described how all these factors were addressed with an excellent and often humorous series of illustrations. The exercise seems to have been a model of excellent practice and

perhaps should be written up in more detail than can possibly be covered here – or maybe the PowerPoint show could be made available on the GCG website? Briefly, a gallery was cleared at Rowley's House to create a work area and a team of volunteers recruited to record and pack up the collection according to a set of carefully defined procedures. The boxed items were moved in the services own transport and similar procedures are covering the merging process at Ludlow. The lessons learned were that planning everything beforehand really pays off. Keeping records up to date, double and cross checking everything, keeping all the paperwork and keeping it all as simple as possible are all highly desirable.

GCG Chairman Mike Howe, Chief Curator at the BGS then gave the first of two presentations. It concerned the JISC-funded GB3D Fossil Types Online project, involving several larger museums (Sedgwick, Oxford University and NMW) as the main partners, with GCG co-ordinating possible input from local museums. The project aim is to create a freely accessible online database of British fossil type specimens with images, some of which will be stereo pairs (anaglyphs) and some in 3D. The project began in November 2011 and runs until the end of July 2013; it will be innovative as the first major source of free 3D and anaglyph images. Having given an overview of the categories of specimens to be included, Mike presented estimates of the numbers of specimens involved, ranging from the Sedgwick's 10,500 to several local authority museums with only one – though the list given was presumably reflecting 'work in progress' as it seemed to be missing quite a few institutions where one would expect (or even know) there to be types present. The mechanics of the project were described (it will be based on an extension of the BGS fossil database PalaeoSaurus) together with an illuminating description of the 3D scanning process - after which we all donned the provided 'glasses' to view the results. Perhaps not quite as immersive as Avatar in a 3D cinema but very impressive nonetheless! Doubtless on an individual computer screen the ability to control the view and move around the specimen will be invaluable. I don't know whether anyone had the presence of mind to photograph us all staring raptly at the screen in our cardboard 'glasses' but it would have been a classic image! Returning to subject, the resulting database will be hosted by BGS but the online results will be badged giving equal prominence to the principal project partners. The data will be supplied on a Creative Commons share and share alike non-commercial licence.

Mike Howe's second presentation concerned the use of barcodes, with some suggested dos and don'ts based on experience at the BGS. He started with some statistics – the offshore core store with some 300,000+ items to track - to highlight why barcodes might be of interest and told us that the BGS library started using Telepen barcoding in 1996. This was illustrated by a neatly barcoded copy of the Geological Curator! He then related several case studies from various areas of the BGS collections, such as the onshore borehole store where it took 3.5 years to barcode 160,000 coreboxes using the Telepen alphanumeric system. Some of the mysteries of barcode workings were explained together with the salient features of Telepen alphanumeric (there are many different barcode

systems) and why it was chosen. It is compact, easy to print and secure, with negligible risk of misreading. Initially BGS used commercially printed barcodes but the adhesive proved unreliable and they have had far more success with self printed labels using EnLabel software (from Image Computer Systems) which allows complete customisation of the label and the addition of other information. Data, including variables can be merged to labels from spreadsheets. It was concluded that many of the BGS large scale core operations would be next to impossible without barcodes. Some recommendations for success were to plan carefully, work out how the barcodes will relate to relevant databases, select a suitable barcode format and type of reader and document your system carefully. Avoid buying inferior barcodes and don't change formats without very good reason.

The final presentation of the day was by Giles Miller from the Natural History Museum who was looking at the cost effectiveness of rapid specimen data entry in relation to the museum's micropalaeontology collections. He started with a brief overview of the collections which include some 750,000 items but many more specimens – illustrated by an image of a slide with well over 50 foraminifera in variety. He then gave the proportions of the principal taxonomic groups represented in the 500,000 slides at South Kensington. These are documented in more than 100,000 manuscript registers which essentially have a tabular format and can be readily transcribed into spreadsheet form by non-specialists. After cleaning and enhancement these data can then be imported as new records into the CMS (KE Emu) and given new Internal Record Numbers. Although some data quality improvements could be made automatically on import, there remained a great deal of data cleaning to do, particularly with regard to bibliographic references and both personal and taxonomic names. The answer with the bibliography was to create an external look-up list of full references. There would always remain a residue which needed hand editing before. The original rapid data entry of the Foraminifera project took 2 people about 4 months in 2009. The checking of files and importing of records has taken 5% of GM's time since September 2010. With the cost of creating the bibliographic references and other overheads the overall cost has been estimated at £36,568 and to date 32,791 imported records have been created. This works out to just over £1 per record and, since the major costs have already been accounted for, this figure will fall as further data relating to 40,000 foraminifera records are cleaned, checked and imported. There are plans to use a similar approach with other NHM collections and there is talk of producing merged catalogues with other institutions using KE Emu, such as the Smithsonian.

Those staying overnight in Leeds gathered at the very slick Red Chilli Chinese restaurant for an excellent and most convivial evening meal around the largest circular table this writer has ever experienced. The following morning the group gathered again at the Discovery Centre to hear Clare Brown, Curator of Natural Sciences at Leeds describe something of the history of their service from its origins as a Literary and Philosophical Society collection in the 1820s. With a chequered history involving several buildings, bomb damage during the Second World War

and various temporary stores - some with poor conditions, the future for the collection was finally set to improve when the plan to establish the Discovery Centre as a 'display store' was approved. Opened in 2007, the Discovery Centre cost £6.7 million and was funded by the HLF, Yorkshire Forward and Leeds City Council in a joint application which also included the refurbishment of Leeds City Museum. The Discovery Centre includes separately controlled stores, quarantine area, conservation labs and education facilities. The main store is one large room (maintained at a constant 55% RH and 16° C.), together with separately controlled photograph store, vented spirit store and a safe for weapons. The pest control system is essentially a large walk-in freezer where all incoming material is taken down to -35° C. for a week. As a display store, anyone can book a visit either by contacting reception or a member of the curatorial staff. It has been a massive plus for the education department and mostly a great success. The scissor lift access to higher racking was described as 'not brilliant' but seemed a small price to pay for such great facilities –as we witnessed for ourselves during a guided tour after coffee. Entered through an airlock room, the main store is the size of a small aircraft hangar with exposed air handling ducts in the roofspace. With various discrete areas of longspan shelving racks, mobile shelving runs of various types and other storage furniture to suit different classes of objects it is clearly well thought out. The open shelving though has a glorious miscellany of items all on open display which are sure to engage the attention of anyone who enters.

After a brisk walk to a historic town centre pub for an excellent lunch (couldn't fault the local knowledge of good places to eat...) the final session was a visit to the refurbished natural history displays in Leeds City Museum. These were an impressive amalgamation of modern display techniques and casework in a 19th century building space. Traditional and often large taxidermy is combined to good effect with modern graphics and captioning while the geology has some innovative hands-on activities for younger visitors as well as a more traditional time-line approach. There were plenty of other visitors present whose attention seemed to be well engaged. The same could be said of the GCG members present throughout this two day meeting – those who organised it can certainly feel satisfied with a job well done.

Alan Howell

Forthcoming GCG seminars and workshops

Steve McClean who has been Programme Secretary for many years stepped down at the AGM. Many thanks for all his years of hard work. No nominations were forthcoming at the time but we have now persuaded Jeff Liston to stay on the Committee and take over the role. We are therefore a little behind in organising this years schedule of programmes so please keep an eye out on JISC mail and at Geocurators.org for the latest details. If anyone does not have access to these please contact me (Tel 02920573367 or email helen.kerbey@museumwales.ac.uk) and I will ensure you get details as they are announced.

The proposed programme for 2012 includes a basic fossil identification workshop, a seminar on destructive sampling and analytical methods, and the AGM in December 2012 on Designing Exhibitions. Suggestions for workshops and seminars are always welcome.

Other programmes of interest

3rd March, **Nature's Treasures 4** Oxford University Museum of Natural History
<http://www.russellsoc.org/rsnews.html#news3>

5 - 16 March **Minerals and Fossils Explained An Online Event** by Geology Today. Possibly the first in a series there will be an online discussion with Editor-in-Chief of Geology Today, Professor Peter Doyle, and other experts who will present the series. <http://geologytoday.wordpress.com/>

29-30 March **"Use It or Lose It: Unlocking Potential"**, NATSCA Conference in London at the Horniman Museum and Gardens and the Grant Museum of Zoology,

20th April, Manchester. **More than just fossils? A Geology Masterclass for Social History Curators.** Organised by the Social History Curators Group. See www.shcg.org.uk for details

11-16 June **Emerging Technology and Innovation in Natural History Collections Management** SPNHC 27th Annual Meeting Yale University New Haven Connecticut.

27 - 29 August **7th International Conference on Mineralogy and Museums**, Deutsches Hygiene Museum Dresden. www.conventus.de/mm7

September 10-14, 2012, Oxford. **60th meeting of the Symposium of Vertebrate Palaeontology and Comparative Anatomy & 21st meeting of the Symposium of Palaeontological Preparation and Conservation**

22-23 October 2012 **Appreciating Physical Landscapes: Geotourism 1670 - 1970** History of Geology Group (HOGG), The Geological Society (Burlington House), London

Details: Geotourism's burgeoning literature has tended to focus on descriptions and case studies of modern interpretative and promotional provision in protected areas and geoparks. The significant historical antecedents of modern geotourism in Britain and Europe are comparatively neglected in the literature. Whilst these antecedents can be traced back to the elite 17th century travellers who ventured into wild landscapes and visited caves and mines, early modern geotourism, with many of the features of its present-day provision, can be recognised if not so named from the opening of the 19th century. This latter period more than coincided with the emergence of modern scientific geology and the beginnings of excursion tourism; the organised publication of regional geology guide-books and geology field excursions followed from the first quarter of the nineteenth century. The conference's timeframe opens with the early reportage of elite travellers and the publication of the first travellers' guide-books and closes at the cusp of modern

landscape and geoconservation measures, such as national parks, areas of outstanding natural beauty, national nature reserves, and the emergence of environmental interpretation and modern countryside leisure as forerunners to modern geopark provision.

News and publications

Nicolas Steno remembered with a Google doodle 11th January

From telegraph.co.uk: "Nicolas Steno, known as the "father of geology", has been celebrated by Google with a doodle to mark his 374th birthday. Steno was a Danish anatomist and geologist famous for his "principle of original horizontality", the theory that layers of rock are formed horizontally. He also devised the "law of superposition", the basic idea that the oldest layers of the earth are at the bottom unless they have been disturbed. His work on geological layers meant he was also seen as a pioneer of stratigraphy, the study of strata or layers. Steno's research on fossils included his exploration of how solid objects could be found inside one another, which was published in his 1669 dissertation Prodrromus. He died in 1686 aged 48. In the late 1980s, he was beatified by Pope John Paul II. He had converted from Lutheranism to Catholicism in 1675."

Radioactivity in Queens turns out to be just rocks. News story from New York from May 2011. A man who left his house to charity also left a rock in a box with a radioactive symbol on it. While the Newscopter 7 helicopter flew over the building, reporters were scrambled, residents were evacuated and Hazmat and the bomb squad sorted through boxes. Their conclusion - just a rock with low levels of natural radioactivity.

Freedman, J., 2011. Storage of the radioactive mineral collections held at Plymouth City Museum and Art Gallery, UK. Collections: A Journal for Museum and Archives Professionals. Vol. 7. No. 2. pp.201-212.

Abstract: Devon and Cornwall, in the South West of Britain, have a rich variety of rare and beautiful minerals formed through millions of years of geological change. Plymouth City Museum and Art Gallery (PCMAG), in Devon, holds over 10,000 mineral specimens from rare and unique sites across Devon and Cornwall. Held within the main mineral collection at PCMAG are 139 radioactive minerals. This paper explores the best practice for storing the radioactive mineral collection safely in the workplace, minimising any potential hazard and risk to staff and researchers. Included in this paper are examples of how other museums have stored their radioactive minerals safely and includes relevant legislation. The storage project also allowed the opportunity to digitally image the entire radioactive mineral collection permitting PCMAG's database to be updated with images, and new storage information. PCMAG worked closely with a Radiation Protection Advisor for advice and also appointed three Radiation Protection Supervisors to monitor access to the collections and reduce any potential risk further

Geology of south Dorset and south-east Devon and its World Heritage Coast (A Special Memoir) 2011 Woods, M.A. ISBN 9780852726549 161pp British Geological Survey. Covers 1:50 000 geological sheets E341, E342, E343 and parts of E326, E327, E329, E339, E340.

Comparing the Geological and Fossil Records: Implications for Biodiversity Studies 2011 Edited by A. McGowan and A. B. Smith. Special Publication 358 ISBN: 978-1-86239-336-3 Geological Society Publications

Dinosaurs and Other Extinct Saurians: A Historical Perspective, 2010 Edited by R. T. J. Moody, E. Buffetaut, D. Naish and D. M. Martill. Special Publication 343 ISBN: 978-1-86239-311-0, 394pp Geological Society Publications

Rock-Forming Minerals Volume 5A Oxides, Hydroxides and Sulphides (Second Edition) 2011 By J. F. W. Bowles, R. A. Howie, D. J. Vaughan and J. Zussman ISBN: 978-1-86239-315-8, 936pp Geological Society Publications

The Roadside Geology of Wales 2011 by Jim Talbot and John Cosgrove. Geologists Association Publication No. 69 ISBN 9780900717512

Geology of the Jurassic Coast. The Isle of Purbeck—Weymouth to Studland. 2011 By Paul Ensom and Malcolm Turnbull. Coastal Publishing ISBN 9781907701009 128pp

Lost and Found news

William Caerhays mineral collection found in Vegetable Store

Curator Courtenay Smale was astonished to find minerals all over Caerhays Castle in Cornwall from the cellar to cupboards, mantle pieces, the vegetable room and the cold store. Left undiscovered for 100 years, the Caerhays mineral collection is reported to be truly spectacular and now forms part of house tours. Further information at: www.caerhays.co.uk Tel: 01872 501310

Darwin's Lost Fossils Found

Fossils lost for 165 years have been unearthed in an old cabinet at the British Geological Survey by Dr. Howard Falcon Long. Some of those found were microscope slides of fossil wood collected by Charles Darwin on his Voyage of the Beagle in 1834. They now have been registered and photographed and are available for viewing by the public through a new online museum exhibit at: <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/archives/jdhooker/> See also an article by Howard Falcon Long in *Geology Today Magazine* Vol 28 p26-30 January/February 2012

George Rae's fossils lost

As some of you know I have been working with the family/friends of a gentleman called George Rae [who was a Girvan fossil collector all his life] preparing some of his collection of fossils, books and all his manuscripts for selling. Mr Rae died

about 10 years ago aged 80+ years. His wife has now recently died and her wishes are that the remaining collection in her home be sold and the money raised, be given to two Colleges specified in her will.

Family friends [Martins] have been asked to take over the disposal of the contents of the house including the fossil collection, books and manuscripts of Mr. Rae. The Martins are keeping some of the collection but are keen to have the remaining collection valued and sold. The books and manuscripts are numerous and require viewing to determine their connection with each fossil. Part of George's collection was bequeathed to the Hungarian Museum when he died but the Martins believe there are some fossils from his collection in a museum which were only on loan but they are unsure which museum. They are keen for these "on loan" fossils to be returned. My role has been to document the collection to be sold, photograph them and facilitate their sale. I have now got a pictorial record of the fossils that are for sale I would appreciate if you could let me know if you are interested in viewing/valuing/purchasing any part of the collection [fossils, books or manuscripts], if you know where the "on loan" collection is and if you would forward this email to any of your colleagues who may also be interested. Very Many Thanks and Best Wishes Diana moffatdmt@hotmail.com

Editor's Note

Thanks to all those who sent me articles and reports for this edition of Coprolite. Please keep sending information you think may be of interest to our members. Books and exhibitions are particularly hard to find. Reports from any meetings are welcome (not just GCG ones). Alternatively, if there's something you wish to read about that we don't cover let us know.
Helen Kerbey, National Museum Wales.

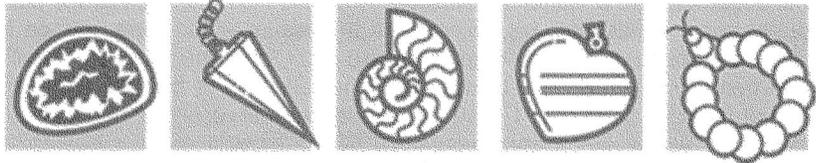
GEOLOGICAL
CURATORS
GROUP



Affiliated to the
Geological Society of London
registered charity no. 296050

ROCKSHOP

W H O L E S A L E



WHOLESALE CRYSTALS MINERALS & FOSSILS Specimens & Display Pieces

**mail order & 10,000 sq ft cash and carry showrooms
call 01484 485599 for free catalogues
OR VISIT WWW.ROCKSHOPWHOLESALE.COM**

Clinton Burhouse is always looking for crystals, minerals, display cabinets, books, maps etc.. for his collection or for brokering to others. We can offer a very professional service in the liquidation of unwanted natural history collections. Turn your unwanted items into useful resource.

Contact Clinton on: 07765231855