COPROLITE

No. 72 March 2014

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.

Membership

Dues are now due for 2014. Don't wait to be asked! If you don't pay by Standing Order, you can send cheques to Cindy Howells, GCG Membership Secretary, Department of Geology, Amgeuddfa Cymru - National Museum Wales, CF10 3NP. Email: cindy.howells@museumwales.ac.uk

Membership rates remain the same this year. £15 for UK subscribers, £18 overseas, and there is also an optional £10 rate for the unwaged.

Muscial Curators

Elgin Museum has appointed **Dr Sue Beardmore** to the one year post of Curatorial Assistant (Palaeontology) funded by the Recognition Fund. The purpose is to work on their outstanding collection of local vertebrate fossils: updating the catalogue, creating a searchable database and preparing for the next project, which is the rehousing of the fossils in an accessible store. Sue will also be working with their other natural history, to coordinate a plan for its rationalisation to make appropriate space for the fossils, all in collaboration with Dr Nick Fraser,

National Museums Scotland. Sue will also be promulgating the fossils to researchers, geology groups, other museums, schools, staff and volunteers, so please get in contact via curator@elginmuseum.org.uk

The Natural History Museum now has a full-time Ores Curator: **Helena Toman** joined the Earth Science Department (as it is now called) in March 2013 and is the main point for access to the 16,000 mineral deposit samples.

Zoë Hughes has been appointed to the New post of Curator of Brachiopods and Cephalopods in the Earth science department at the Natural History Museum and looks after all the fossil cephalopods and both fossil and recent brachiopods.

Alan Howell will be retiring on May 6th from the position of Senior Curator at the Guernsey Museum and Art Galleries. The Natural History Curator post will not be re-appointed in the short to medium term in order to hit cost saving targets.

Will Watts left Scarborough Museums Trust in December last year (after 12 years) as one of a number of staff changes brought about by a restructuring. Any geology enquires for the Museums Trust, including the Rotunda Museum, should be directed to Debbie Seymour, Chief Executive at debbie.seymour@smtrust.uk.com. Will has set up his own company, Hidden Horizons, based in Scarborough providing museum consultancy and also delivering geology and natural history events for schools and the general public (including a Fossil Festival in September), anybody wanting to contact Will can do so via will.watts@hiddenhorizons.co.uk

New Members

Homer Esbaugh, Wisconsin, USA; **Luanne Meehitiya**, Thinktank, Birmingham; **Dean Lomax**, Curator, Doncaster Museum; **Trevor Price**, Community Learning Officer, Dinosaur Isle Museum; **Julie Reynolds**, UK Regional Programme Collections Co-ordinator, NHM; **Bob Finch**, School Curator, University of Leeds; **Sarah Joomun**, Digitization Assistant, Oxford University Museum.

Obituary - Dr Brian Atkins

Dr Brian Atkins died unexpectedly, but peacefully in his sleep on Boxing Day morning. He was the first Curator of the Mineral Collections at the Oxford University Museum of Natural History from 1969 until his early retirement in 1997, and had been undergraduate and postgrad student, demonstrator and then Departmental Lecturer in the Earth Sciences Department at Oxford. He was a true museum professional who overhauled a very muddled mineral collection and made it into one of the best curated and fastest growing mineral collections in the country. His Departmental teaching included organising the annual student field trips to the Isle of Arran, and he co-authored, with Stuart McKerrow, the GA Field Guide to the island. His research into igneous petrology and mineralogy took him further afield, to South Africa, Greenland, Iceland and Ascension Island. Our sympathies go to his wife Pat and all his family.
Monica Price, Head of Earth Collections

GCG Committee 2014

Chairman: Giles Miller. (Contact details on front cover.) I have been working as a curator at the Natural History Museum for 20 years and am currently a Senior Curator in the Earth Science Department. My speciality is micropaleontology but I have worked with a range of palaeontological collections and published on several fossil groups and collections management issues. I have a particular interest in delivering collections information via the web and the use of new media, such as blogs, Twitter and Facebook, to enhance the profile of Earth Science collections. I bring experience as a past member of several Micropalaeontological Society committees and am currently on the Collections Advisory Committee of the British Geological Survey. I was on the GCG Committee from 1999-2005, first as a committee member and subsequently as Secretary.

Secretary: Helen Kerbey. (Contact details on front cover.) I have been working in museums since 1998 when I was employed in the Camborne School of Mines Geological Museum shop. I moved from there to Clitheroe Museum and then to the National Museum of Wales. For several years I was Collection Manager for Min/Pet but I now work in the geology preparation laboratories where I make thin sections and analyse minerals. I also compile the newsletter Coprolite and work part time on the Mineralogical Magazine for the Mineralogical Society.

Treasurer: John Nudds. (Contact details on front cover.) Having worked in the museum sector for a quarter of a century in both Trinity College Dublin and Manchester University Museum, I am now Senior Lecturer in Palaeontology in the School of Earth, Atmospheric and Environmental Sciences at The University of Manchester, and Programme Director for the Geography and Geology Joint Degree. I retain a keen interest in geology in museums, but am alarmed by the current trend which places entertainment over care of collections.

Programme Secretary: Jim Spenser. Email jimspencer11@gmail.com

Collections Officer: Mike Howe. British Geological Survey, Kingsley Dunham Centre, Keyworth, Nottingham NG12 5GG. Email mhowe@bgs.ac.uk
Mike Howe is the Collections Officer (previously known as the Recorder). He is responsible for monitoring all collections across the UK that contain geological samples and highlighting any concerns to the Committee. He is responsible for the content of the Collections pages on the GCG Website (http://www.geocurator.org/colls/colls.htm) and the organisation of the "State and Status" Surveys. His day job is Chief Curator and head of the National Geological Repository at the British Geological Survey (BGS) - http://www.bgs.ac.uk/staff/profiles/3858.html.

Minutes secretary: Tony Morgan, Geologist, Clore Natural History Centre, World Museum Liverpool, William Brown Street, Liverpool, L3 8EN. Email tony.morgan@liverpoolmuseums.org.uk

Membership Secretary: Cindy Howells, Department of Geology, Amgueddfa Cymru - National Museum Wales, Cathays Park, Cardiff, CF10 3NP. Email cindy.howells@museumwales.ac.uk

Editor-Journal: Matthew Parkes, Natural History Museum, Merrion Street, Dublin 2, Ireland. Email mparkes@museum.ie

Editor-Coprolite: Helen Kerbey, Research Assistant - Laboratory Services, Amgueddfa Cymru - National Museum Wales, Cathays Park, Cardiff F64 4DL. Email helen.kerbey@museumwales.ac.uk

Web Officer: Hannah Chalk, School of Earth, Atmospheric and Environmental Sciences, University of Manchester, Manchester M13 9PL. Email hannah-lee.chalk@manchester.ac.uk

Committee Members:

Kathryn Riddington: After being a natural sciences curator for almost 10 years, I have recently returned to the Lapworth Museum where I am now Assistant Curator. We are currently preparing a HLF bid to redevelop the museum, and update our stores. I also help with school groups and undergraduate students. My main research area is micropalaeontology: particularly Jurassic ostracods and forams. I am interested in geoconservation and attend meetings of the English Geodiversity Forum, which is currently writing the English Geodiversity Charter on behalf of GCG.

Tim Ewin: Dr Timothy A. M. Ewin, Curator of Invertebrate Palaeontology (Echinoderms and Public Enquiries) Department of Earth Sciences, The Natural History Museum London, Cromwell Road, South Kensington, London, SW7 5BD, Email t.ewin@nhm.ac.uk. See **Meet the curator** for more about Tim Ewin later in this newsletter.

Sarah King: I am the new Curator of Natural Science at York Museums Trust, based at the Yorkshire Museum in York, having worked here as a Collections Facilitator for nearly a year. Prior to this I was at the University of Birmingham for my PhD in palaeobotany. I am responsible for the Trusts extensive geology and biology collections: numbering around 120 000 and 200 000 specimens respectively. Over the coming years I will be working towards raising the profile of the collections and developing networks, research and activities surrounding them.

Co-opted Members:

Emma Bernard: I am the GCG/NatSCA rep, which involves updating both groups on where there are common themes and helping to co-ordinate joint meetings. I also run all social media for GCG, so get involved! I curate and manage the Fossil Fish section at the NHM, London although I do work with other Palaeontology collections across the Earth Science Department. I host scientists at various stages of their career, process loans and destructive sampling applications, assist with exhibitions, design and deliver a number of outreach activities and participate in many fieldwork projects globally. I am also developing research projects in Morocco and Oxford. I have a particular interest in collection management and policy development. My background is in geology, palaeontology and museum studies. I have worked in small, regional and national museums.

Chairman's Report

On the way home from the AGM I tweeted '35 years later and that small boy with his own Geology museum under his bed is now Chairman of the Geological Curators' Group. Chuffed.' I am indeed very honoured to be chosen as the Chairman on GCG and hope that I will represent our group in the appropriate way. The first thing that I would like to do is to express the thanks of the group for the great job that Mike Howe has done as Chairman over the last three years. The 3-D fossils project has been the highlight of his chairmanship and in many ways this one project has fulfilled many of the objectives of the Geological Curators' Group in raising the profile of collections across the UK. The collections imaged are now available to all in spectacular 3-D and can even be replicated using a 3-D printer. As Mike showed in his talk at the 2013 AGM, the initial surge of interest in the web delivery was very encouraging. It will be down to all of us to continue to advertise, use and hopefully add to this major collections resource over the coming years.

At the start of my three years as Chairman it is tempting to try to compare the current state of the GCG with the situation when I finished being Secretary back in 2006. In many ways there has been little change: with impending cuts hanging over our heads and curators being asked to do more with less resources and many asked to manage collections for which they do not have specialist experience or training. These are familiar issues so I decided to look back at the State and Status review published in 2005 by Helen Fothergill (and the Doughty Report of 1981) to review some of the suggestions and provide some direction for future GCG initiatives.

There is clearly a need for help in providing insurance valuations, expert identifications and advice on storage and conservation of geological materials. We are looking to set up a database of skills offered by members of the GCG who could willingly provide advice. In the first instance this may look no more than a page on our web site with a list of members and their areas of expertise. New committee member Tim Ewin will be taking this forward and we look forward to seeing this develop as a major resource in the near future.

The Guidelines to Curation of Geological Material first published by Howard Brunton *et al.* in 1984 have been updated and we plan to publish these soon. Journal Editor Matthew Parkes has been co-ordinating this and we plan to publish a series of simple factsheets with advice to be made available as pdfs on our website. With all these initiatives, we are looking to firmly place the GCG in a position where we are seen as the first port of call for advice on managing Geological collections.

The subject of the NatSCA session at the forthcoming SPNHC meeting in Cardiff is Advocacy. Fothergill (2005, p107) states 'unless museums promote what they hold in some publically accessible way, the owners of those collections (often, but not always the public themselves) will be justified in questioning the museum's continued existence. The museum community, as we are all aware of, cannot simply assume that the people that ultimately pay our wages, understand why it is

important to preserve these collections'. Organisations such as the Museums Association seem to have a restricted view on how museum collections are being, and should be, used. I believe that if we are to challenge these viewpoints and argue for support for management of geological collections, we need to clearly state why and how our collections are currently being used effectively. The onus is on us to come forward with stories showing why it is important to maintain the collections in our care. We have set up a blog and would like to encourage as many people as possible to contribute by writing or providing stories.

As well as following initiatives relating to the State and Status reviews, we as a committee would like to maintain an open ear and accurately represent our community. We have decided to instigate a short on-line questionnaire to find out what you as members of the GCG want us to deliver. Over the next three years as Chairman, I hope to listen to these views and with your support, direct our group accordingly. Please help support the GCG by taking a few minutes to reply to this on-line survey that will include an invitation for joining our skills database and some important questions such as whether we should change to distributing our publications electronically by pdf, a move that may have beneficial financial repercussions for our group.

We are of course not alone in our remit of encouraging the best standards for management of geological collections. There continue to be many similarities between NatSCA and GCG as Geological collections are by definition classified as Natural Science collections. NatSCA include many geologists amongst their membership and many Natural Science Curators with responsibilities for geological collections. With the decline of the specialist curator hitting both our membership numbers over the last few years, I see us working much closer together in future, not replacing each other in relevance but by sharing skills and expertise.

As Chairman elect I attended the October Committee Meeting of NatSCA at Manchester with Emma Bernard who is our NatSCA rep and will be reporting back to GCG Committee from future meetings. We were invited to this particular meeting in Manchester to discuss a Memorandum of Understanding between NatSCA, SPNHC and GCG that we propose to sign at the Cardiff Meeting of SPNHC/NatSCA/GCG in June. More immediate collaborations include arranging a joint meeting on Hazards in Natural Science Collections to be held in Oxford in April, sharing of posts to our blogs and discussing a possible future joint meeting on a geological topic at the Geological Society.

More recent NatSCA based collaborations have included a meeting at The Linnean Society for the National Nature Collections Information Project, a project sponsored by the Natural History Museum, the Natural Sciences Collections Association (NatSCA) and the Linnean Society Taxonomy & Systematics Committee. The overall aim of the workshop was to agree a project proposal for a collections-level information system for natural science collections in the UK. This has appeared on Twitter under the hash-tag #NatureData and we hope as the GCG to provide the Geological advice on setting up an on-line database of Natural

History Collections. This project is at an early stage of development and more established members of the GCG will point to the fact that the FENSCORE database provides similar, if not totally up to date information. We would be very interested to hear from members if they would use a database like this and if so, what is the minimum level of data that would be necessary for any dataset to be useful?

On the 16th Jan I attended a UK Consortium Meeting of directors of museums throughout the UK. The aim of the meeting was to explore how the NHM, national and regional museums, and related organisations might collaborate to address the challenges of ensuring and promoting the long-term preservation and use of UK natural history collections. The consortium aims to create a plan of support for non-natural science collection professionals, to identify common issues that need support and help and identify effective collaboration projects. Key issues raised included training and development for identifications, conservation issues and valuations. Advocacy was high on the agenda as well as the development of several key projects that will highlight the applications and value of natural history collections across the UK. At the end of the meeting, two groups were set up, one (including me representing the GCG) to discuss how structured networks could work and another to investigate setting up several fundable advocacy projects.

Other groups with remits overlapping with the GCG include the Geodiversity Forum who have drawn up an English Geodiversity Charter. We have been working closely with them via committee member Kate Riddington, to provide examples in the charter of how museums help in the education of Geodiversity. We will advertise the Charter widely once it is published. Another closely related group is the Earth Science Education Forum and we will be providing a presentation at their October meeting at the Geological Society.

You will gather from my report that the committee are currently very active. If you would like to keep up to date then follow us on Facebook, Twitter (@OriginalGCG), on the JISCmail server or via our website. The popular jobs and latest news sections of the website are kept up to date thanks to the hard work of Webmaster Hannah Chalk. Finally I would like to ask for your support and comments by filling out our on-line questionnaire once it is rolled out. Giles Miller 27 Jan 2014

Brighton medal Presentation by Mike Howe

Today, as outgoing Chairman of GCG, I have the honour of presenting the 10th Brighton Medal. The Brighton Medal was inaugurated in 1992 with the aim of recognising the work of A.G. "Bertie" Brighton, curator of the Sedgwick Museum, Cambridge from 1931 – 1968, during which time he documented over 375,000 specimens, at an average rate of over 10,000 a year. It acknowledges the importance of good curation in advancing geological science. The medal was the idea of the late Dr David Price, Assistant Curator of the Sedgwick Museum from 1972, and then Curator. David was well aware that the meticulous work of curatorial staff, essential to the progress of research, was frequently unrecognised, or worse – belittled – by senior management. Sadly, this contributed to his suicide

in November 1991. As well as the Brighton medal, David's legacy to the organisation of collections was the pioneering use of digital databases. The Sedgwick Museum's system, building on the basic digitising work of the 1970s, reached its acme in the 1980's, with a system much superior to many of those in use today. Its information retrieval was particularly impressive. It used a fuzzy search technique, breaking down terms into small fragments and searching for each, before recombining the results into a list of decreasing similarity. Thus searching for the Sholeshook Limestone would also bring back specimens entered as being from the Sholeshook Limestone Formation, the Sholeshook Limestone Horizon, and various alternative spellings and mis-spellings. This search brought back 856 specimens, rather than the 384 specimens that would have been returned by a simple search. David was posthumously awarded one of the first two Brighton Medals for his contribution.

In awarding the 10th Medal, I should like to mark another curator who has opened up access to collections through digital databases, in this case online. At this point I should like to go back to 12 o'clock on 15th May 2002 in the BGS de la Beche lecture theatre, when the medal recipient gave a talk entitled "9 years of INCA: evolution of a museum catalogue". He debugged the notion that online catalogues had to be expensive and demonstrated a system using freeware running on a discarded PC. Since then he has continued to make quiet progress and now many of the Hunterian Museum specimens, including images, are online and Google searches for geological specimens frequently turn up links to the Hunterian online catalogues. Despite old technology at its core, INCA has proved open and flexible enough to feed data via current web technologies and standards. INCA has also been used in Dundee and Leicester. Ironically, 15th November 2013 was the last day for using INCA in Glasgow as the data has been migrated to KE Emu, although the web version will remain for the time being.

I am, of course, talking about **John Faithfull**, Curator of Geology at the Hunterian Museum and Art gallery, University of Glasgow. John has a BSc in Geology and a PhD on layered igneous rocks from Rum (both from the University of Durham). After a spell as Curator of Mineralogy and Petrology at Leicester University, from 1984 to 1991, he has been Curator of Mineralogy and Petrology at the Hunterian since 1992. John has been widely involved in general geological issues such as the ethical and practical issues relating to collecting, conservation, university research and teaching collections, curation of radioactive minerals and asbestos, public geological engagement. He has also served on the GCG Committee, and on other community bodies.

He has wide geological interests, including field collecting, historical and topographical mineralogy, granite pegmatites, layered intrusions, mantle xenoliths and processes, geochemistry, meteorites, gemstones, history of sciences (isotopes in particular), conservation – and even recently Carboniferous sedimentology and palaeontology. He has managed to maintain an active research role in mineralogy and petrology, and has been a strong advocate for closer links between the museum and mainstream research communities.

During this time he has pioneered online access to museum catalogues, and I should like to mark this with the award of the Brighton Medal. A secondary reason, known to few, is that John has helped to safeguard the UK Continental Shelf hydrocarbon well core and sample collection, upon which much of the ongoing oil and gas exploration depends. John chaired the committee that drew up the methodology for moving the material safely from Edinburgh to Keyworth and at the same time providing core photographs on the web, freely accessible by all. It is true to say that John has played a small but important part in helping to keep the nation's lights on.

It gives me great pleasure to award the 10th Brighton medal to Dr John Faithfull.

Brighton Medal 2013 recipient John Faithfull writes...

Those of you who were at the GCG meeting at Canterbury in December will have heard Mike Howe's presentation of the Brighton Medal. Due to technical problems, I was unable to say "thank you" via Skype at the time, so I thought it would be nice to respond via Coprolite.

I am extremely honoured. This is the first medal I've had since the Duke of Edinburgh's Bronze Award (some time ago!), and the first unsolicited one I've ever received. It's very encouraging to feel appreciated by others, and I'm grateful and surprised that my work has been considered of significance. Looking at the past Brighton Medal recipients, including my mentor at the University of Leicester, Roy Clements, two feelings arise: first, do I really deserve this? And second, I must be getting old, if my career is long enough to be considered worthy.

To my amazement, this will be my 30th year in the curatorial business. During this time, I have held two posts, both with the same title: Curator of Mineralogy and Petrology. First, at the University of Leicester Geology Department (1984-1991), and from 1992 at the Hunterian, University of Glasgow. Despite the job titles, at both places, I have spent an awful lot of time on other areas of work, and in particular, on writing software related to museum documentation. I've been lucky in having worked with some wonderful, and insightful people, and most of what I've done has been based on listening to others. Here are some thoughts:

Working alongside more experienced colleagues provides unique and invaluable knowledge transfer. People like Roy Clements, and Graham Durant have been a huge influence on me. This overlap in working lives seems to me one of the most precious and important aspects of gaining useful experience. This is now under threat, as specialist curatorial work and perspectives are undervalued and under-resourced in the current museum sector. Curatorial partnerships and teams provide a much better service, and in the long run, better value for money through better collections use and advocacy.

Don't just listen to specialists. This is not to devalue specialism – any good multidisciplinary work depends on sound and rigorous disciplinary knowledge.

However, specialists' views of their own issues are not necessarily the only ones, and may not be the basis for optimum and generally applicable solutions. By taking a broad view of what a specimen may be, you can create tools which will work not just mineralogy, petrology and palaeontology, but also for numismatics, anatomy, or art collections.

Don't be proprietorial about data: they don't belong to you. If you look after a public collection, the data are for the public. Get the stuff out there – open it up to peer review and re-use as soon as possible. You'll learn things from users, and your users will learn about your collections.

We need space to be creative. Having time and space to get out and about, and to engage with academic and applied geologists, research and other users, documentation and computer people, other collections, and bodies such as GCG, SPNHC is vital. This is increasingly important, and alas, increasingly difficult in the UK museum sector given lack of priority given to specialist curatorial posts.

There is no formula. Effective collections development, management, documentation and access is not delivered by following some ideal set of procedures. It is about making the best of circumstances, prioritising outputs, being opportunistic and imaginative, and developing and listening to potential users.

Good tea/coffee rooms are invaluable. Informal communication is the most important and useful way of generating ideas and broadening perspectives. Drink, chat, listen and ponder.

POSTSCRIPT: The Brighton Medal is cast in silver, and a batch of 10 were produced by the Tower Mint, in London in 1992. If you want see what is looks like, there are images here: http://tinyurl.com/kf2d2tr.

Exhibitions

LEGO® Lost World Zoo 26th February – 27th April
Milestones Museum, Basingstoke www.milestones-museum.com
LEGO artists from British company 'Bright Bricks' were inspired by the collections of natural history specimens and worked closely with Hampshire County Council's Keeper of Natural History to build some exciting new LEGO models of extinct animals. Species that historically roamed Hampshire are also represented, including the Woolly Mammoth. Some of the original specimens that inspired the designs can be seen alongside the LEGO models. Throughout March you can watch a huge 2.5m tall Woolly Mammoth being built live from LEGO bricks on the indoor museum 'showground' by a certified LEGO builder; it will then be displayed throughout the Easter holidays until 27th April.

Volcanoes and Earthquakes at the Natural History Museum, London
Volcanoes and Earthquakes – immerse yourself in Earth's explosive power in this

revealing gallery. Through the Natural History Museum's own scientific research, immersive experiences, real-life case studies and up to date information from around the world, Volcanoes and Earthquakes provides a fresh and intriguing account of the almighty force of our natural world.

Opening at the end of January 2014, what was the 'Power Within' has had a big make-over, given a new name, and been given a new, fresh lease of life. The content has been updated and been made relevant to today's society.

Fossil, mineral and gem shows 2014

9 March	Oxford Mineral Fossil Shows, Exeter Hall, Kidlington, OX5 1AB.
22-23 March	Brighton Racecourse. Rock & Gem Show.
12-13 April	Newton Abbot Racecourse. Rock & Gem Show.
3-4 May	Bath and West Showground. Rock & Gem Show.
11 May	Oxford Mineral Fossil Shows, Exeter Hall, Kidlington, OX5 1AB.

Find further information on Rock & Gem shows at www.rockngem.co.uk email info@rockngem.co.uk. Find further information on Oxford Mineral Fossil Shows at www.oxfordshow.co.uk, email oxfordshow@gmail.com.

Forthcoming seminars and workshops

Check our website www.geocurator.org for updates to our seminar programme

21st May 2014

Symposium to celebrate the life and work of Sir Arthur Smith Woodward

The Natural History Museum, London. Registration is free.

22nd - 28th June 2014

29th Society for the Preservation of Natural History Collections Annual Meeting, Historic Collections- Future Resource.

During June 2014 Amgueddfa Cymru - National Museum Wales (AC-NMW), in partnership with the Natural Sciences Collections Association (NatSCA), and the GCG, are honoured to be hosting the 29th SPNHC Annual General Meeting in Cardiff, the capital city of Wales.

The meeting will be the usual busy mix of field-trips, technical sessions, workshops and social events run over the course of the week. At its heart will be the two days of talks, trade-show and demonstrations which will be held at the iconic Wales Millennium Centre in the historic Cardiff Bay area of the city.

The overall theme of the 2014 conference will be 'Historic Collections: Future Resource' which will be an opportunity to link the collections at the heart of Natural History Institutions to the demands and uses these collections are meeting in the modern world. http://www.museumwales.ac.uk/spnhc2014/

1st - 5th September 2014
21st General Meeting of the International Mineralogical Association to be held from at the Sandton Convention centre in the Gauteng province of South Africa. Theme: Minerals, museums, culture and history.

11th September 2014
Geo-Materials Sample Preparation for Microscopy Workshop
Joint meeting by the Royal Microscopy Society and GCG
http://www.rms.org.uk/events/Forthcoming_Events/Geo-Materials

A one day workshop discussing existing and new techniques used in the preparation and storage of geo-materials initially examined by light and scanning electron microscopy.

13th - 19th October 2014
Earth Science Week, 'Our Geo-Heritage'
This year, The Geological Society is planning a major new initiative to celebrate the UK's most significant geological sites, to be launched in time for Earth Science Week. More news about this will follow in the next couple of months. We're hoping that events during Earth Science Week will help to promote the UK's geological heritage sites, from famous landmarks such as the Giant's Causeway, to less well known areas of geological significance, so do get in touch with ideas. As ever, we want to promote guided and self guided geology walks, in towns and cities as well as the countryside, so let us know if you're able to plan one during the week and we'll make sure it gets publicised.

All ideas, whether based around the theme or not, are very welcome. We can promote activities online via our website, blog and social media sites, and through our network of affiliated schools, Universities and Friends of the Society – so we're looking for events and activities that cater for a wide range of audiences!

The homepage is www.geolsoc.org.uk/earthscienceweek, which will be continually updated throughout the year. Please email ESWUK@geolsoc.org.uk if you want to propose an idea, or find out more about getting involved.
Sarah Day, Earth Science Communicator. sarah.day@geolsoc.org.uk

2nd -3rd December 2014
Geological Curators Group 41st AGM, Birmingham Thinktank
Topic: Grant writing and obtaining funds. **Book the date now!**

Publications and resources of interest

Verveniotou, E. 2013. Pyrite-related bibliography. http://www.icom-cc.org/54/document/pyrite-related-bibliography/?id=1160

Gemdat.org - a new online resource for gems and minerals, in a similar format to mindat.

Rieppel, L. 2012. Bringing dinosaurs back to life: Exhibiting prehistory at the American Museum of Natural History. Isis 103(3):460-490. http://www.jstor.org/stable/10.1086/667969.

Bibliography of Charles Lyell by Stuart Baldwin
I have recently written and published a 36 page Brief Bibliography of Charles Lyell which includes all UK editions of his works until 1875 and biographies of him and journal articles on and by Lyell. It is available as a FREE DOWNLOAD by contacting me on sbaldwin@fossilbooks.co.uk

A New Journal for NatSCA The Natural Science Collections Association (NatSCA) is proud to announce the launch of the Journal of Natural Science Collections, a brand new peer-reviewed journal for people working with natural science collections. The new journal replaces the NatSCA News (2003-2012) and its debut volume is hot off the press and making its way to NatSCA members around the World.

The new Journal of Natural Science Collections is central to NatSCA's mission to support natural science collections, the institutions that house them and the people that work with them, in order to improve collections care, understanding, accessibility and enjoyment for all. All articles are peer reviewed by external reviewers, chosen for their subject specialist knowledge to ensure quality. The new journal will be published annually, providing a platform for professional development within the sector and a showcase for research on natural science collections worldwide. We encourage submissions from anyone who works with, or otherwise uses, natural science collections.

The journal will be provided to all NatSCA members and after one year the articles will be made freely available for all online at http://natsca.org/pubs. Details of the manuscript submission process can be found at http://natsca.org/pubs.

Collections News

The Museums Association's Esmée Fairbairn Collections Fund - A great source of funding for geological collections enabling research, documentation, conservation, re-curation and reviews etc.

The Museums Association's flagship collections programme, the Esmée Fairbairn Collections Fund (EFCF), will run until at least 2016, making one million pounds available to museums every year. This fund supports 'time-limited collections work outside the scope of an organisation's core resources' to promote better understanding and use of collections (even geology/palaeontology!). Grants of between £20,000 and £100,000 are available for research into collections, conservation, collection reviews and initiatives to develop the use of collections. Successful applications will include work that: 'is developmental, in some cases innovative; in some cases sector-changing in scale; and builds a legacy that has an impact after the duration of the project, even if this is hard to define at the

start of the project. The aim is that projects result in: better understanding of collections; better appreciation of the potential of collections; and better use of collections'. Two examples follow where palaeontological collections have greatly benefitted from this source of funding.

Example 1
In 2011 Doncaster Museum and Art Gallery (DONMG) was awarded £82,785 from what was then the 'Museums and Heritage Strand' of the Esmée Fairbairn Foundation. The project, termed CIRCA (Catalogued, Interpreted, Researched, Conserved, Accessible) fitted within a wider review of all the Doncaster Museum Service collections. The CIRCA project was designed to completely review and revitalise the museum's palaeontology collection, which had slipped from academic and public awareness, and to create a usable, well maintained and documented collection resulting in increased accessibility for the public and specialists, effectively resurrecting a 'dead' collection. CIRCA was specifically designed so that other museums with palaeontological collections in a similar condition could use this project as a template to assess and improve their own collections, to increase accessibility and enable greater outreach and interpretation possibilities (this project will be published in the Geological Curator soon). The project design specifically allocated funding for the recruitment of suitably experienced external palaeontological consultants. The CIRCA project consisted of:

Collections review: A thorough specimen-level review of c.12,000 individual fossils (initially believed to be 6,000) created a flexible but robust methodology that allowed for informed decisions to be made regarding the retention of specimens in the collection. This resulted in a more focussed, relevant and accessible collection, which the museum would be capable of caring for and which met professional standards.

Documentation: Each retained specimen was fully documented using the museum's database system, MODES. This created a well-documented, organised and user-friendly collection with 'star' specimens highlighted (i.e. those suitable for future display or research).

Research & Publication: To generate interest in and increase usage of the collection, during the documentation and specimen-level review stage all fossils deemed scientifically important were considered for research and eventual publication in regional or national journals or in popular magazines (so far eight papers have been published or are in review, with more planned). This will raise the profile of the collection (and its research potential) within the academic community and the general public.

Re-packing and storage: The previous very poor storage conditions had greatly reduced the collection's accessibility, something that this project rectified. All specimens are now labelled with their unique accession number and the collection is now stored in a logical order (chronologically and taxonomically) in archival media in purpose-built locked cabinets. The new storage provides the specimens

with maximum protection yet enables easy access (reducing the need for over handling and facilitating regular conservation checks).

Conservation: Hundreds of specimens suffering from a wide variety of conservation issues were suitably treated. As well as remedial conservation being undertaken, some specimens had to be prepared to enable their identification. Preventive conservation advice was essential for determining the exact physical media and environmental conditions required for the long term safe storage of the collection as well as for developing handling protocols etc.

Dispersal/Disposal: In order to have a more relevant, focused and usable collection, during the specimen-level review some specimens (if they did not fit into the museum's collections focus) were highlighted for dispersal/disposal. This process (undertaken with guidance from the Museums Association's 'Disposal Toolkit, Guidelines for Museums') was very important when deciding which fossils should remain part of the official, formal palaeontology collection. It allowed for the identification of the relevant and correct repository museums for which the fossils deemed for dispersal could be transferred.

Since the completion of the project, the palaeontology collection is now considered amongst the most important held at DONMG. Several researchers have already visited the collection, and others have expressed a keen interest to use the collection. The collection is now stored and accessible in a way that it can be easily curated by non-specialist staff; resulting in easier access to the collection for academics and for future outreach and display work.

Example 2
Between 2011 and 2013 Exeter's Royal Albert Memorial Museum was awarded £36,825 to pilot a digital 'Collections Prospectus' to link priorities for collections research with the research agendas of academic and research institutions. This entailed an extensive review of its collections of over one million objects. This set out to assess and grade the collections for historical or scientific significance and their potential for research, audience diversification, learning and income generation. This required the input of external specialists to review selected material and the work was put out to tender. For the geology collection, about a thousand specimens were selected for assessment and to have their records augmented.

The brief asked for all the fossils in question to be allocated to the relevant geological period and for the relative scientific and historical importance of each specimen to be determined. This was duly undertaken for all material and the information entered on to an Excel spreadsheet. In addition to this, specimens were checked against the original handwritten registers: first to capture all possible data, then each specimen was graded in terms of the strength of its provenance, its rarity and its condition. Some specimens were highlighted for consideration for dispersal/disposal, other specimens were highlighted for their research potential. Significantly, all the specimens were identified to genus and

species level wherever possible (and old identifications were carefully checked). Out-of date names were updated (but old names were kept as notes in the 'previous identifications' field). Provenance fields were checked with atlases and any previous assumptions or mistakes were corrected. Mis-transcriptions of handwritten labels were also corrected. The following fields were filled-in as fully as possible (and mostly beyond what was required within the brief): common name, full name, phylum, class, genus, species, collection information, geological period/epoch and stage. Commentary was required on every specimen, covering their representativeness of their type and noting any best examples of type locally, regionally or internationally. Their importance, or lack of importance, to the study or development of natural history and palaeontology, internationally and in the SW of England was also noted. In addition, conservation issues were noted as fully as possible. Each row on the Excel spreadsheet represented one single specimen and each of these rows had 57 columns for specific pieces of information about the specimen, meaning a total of about 57,000 cells either needed to be filled with new information or the existing information needed to be checked. In addition, a 36-page report was submitted with the completed spreadsheet along with about a thousand images, as good digital photographs were taken of all the specimens as they were assessed.

Many interesting items turned up during this project, from rhino-like perissodactyl bones from Miocene deposits in Tibet and a very well preserved Silurian crinoid to various unique marine reptile specimens and some interesting early fossil forgeries. There was also time at the end of the project to work through the rest of the palaeontology collection to assess the significance of various sub-collections and to provide advice relating to their conservation needs, and the potential of some for dispersal to more suitable institutions and at the other end of the range the potential for further scientific research.

Nigel Larkin and Dean Lomax worked on both the EFCF-funded projects described above and we think that in both cases the funding greatly enhanced the collections. We have recently assessed and worked on several other geological collections and we would be happy to help any museum assess the state and content of their collection to provide a basis for an application for EFCF (or other) funding. Whilst most people reading this will, by definition, be a geological curator and may not require any external help at all, many of you will know of neighbouring museums that have no specialist in geology, palaeontology or even natural history. If that is the case, please pass on these pages. We would be happy to help them. It seems every small museum we visit has some scientifically significant treasure hidden away that deserves to see the light of day. Do contact us (**Nigel Larkin** and **Dean Lomax**) at: nrlarkin@easynet.co.uk

The next deadline for initial applications for EFCF funding is 4th April 2014. You can find detailed application guidance, frequently asked questions and EFCF application forms here: http://www.museumsassociation.org/collections/18022011-esmee-fairbairn-collections-fund.

Taxonomy and Taxidermy: Linking Natural Science Collections in Wales

Federation of Museums and Art Galleries in Wales. Funded by Esmee Fairbairn Collections Fund. January 2013 – January 2016

Linking Natural Science Collections in Wales has recently celebrated its first birthday and, with that, some impressive achievements. The three-year project aims to implement the concept of a distributed national collection. Currently, the significance and extent of biology and geology collections in Welsh museums are being established. The Welsh Museums Federation leads on the project, which is funded by Esmee Fairbairn Collections Fund.

During the first year partnerships were established with 20 museums across Wales, from Holyhead Maritime Museum to Scolton Manor, from Wrexham Museum to Caldicot Castle. The project partners have in common that they all hold natural science collections, are accredited museums and members of the Welsh Museums Federation.

An initial assessment of the scope of each collection was undertaken, and a collections review methodology developed. The methodology relies heavily on significance assessments and is very quick and easy to learn and apply. Reviews have already been undertaken in a number of museums by specialist curators from Amgueddfa Cymru, assisted by local volunteers and staff. It is expected that all reviews will be completed by May 2014.

The collections reviews establish the current extent of Welsh natural science collections. They have unearthed some amazing gems, for example a world-class geology collection at Radnorshire Museum, a holy rhubarb leaf at Abergavenny Museum, a scallop shell containing a miniature sea weed herbarium at Carmarthenshire County Museum, and a penguin from Shackleton's Antarctic expedition at Cyfarthfa Castle Museum.

These collections will be made publicly available through Peoples' Collection Wales which is currently undergoing redevelopment. One of the successes of Linking Collections is to have worked closely with the redevelopment team to ensure the suitability of the database for the inclusion of natural science data.

Collaborations were established with Cardiff University, leading to a number of successful volunteer projects, and Coleg Cymraeg Cenedlaethol which is going to enable summer project placements at Oriel Ynys Mon and Ceredigion Museum.

Particular reason for celebration is the impetus the project has already given to the Welsh museums sector. Tenby Museum were the first to react to Linking Collections with their own natural science exhibition, featuring their fabulous antiquarian books with drawings of local natural history, side-by-side with specimens from their natural science collection. Other museums are starting to bring their natural science collections into use by updating their existing displays and planning collaborations with artists. Links have been strengthened between

museums, and discussions have been sparked to review and coordinate collecting strategies between museums.

The annual progress report is available from the Welsh Museums Federation website.

Christian Baars, Project Manager - Linking Natural Science Collections in Wales. Federation of Museums and Art Galleries in Wales, c/o National Museum Cardiff, Cathays Park, Cardiff CF10 3NP. Telephone: 07738 056638 twitter: @LinkinCollWales, LinkingCollectionsWales Blog: www.museumwales.ac.uk/en/blog/?cat=1764

Cotterite: Saviour of University College Dublin's mineral collection?

Introduction: The first thing to state is that University College Dublin (Belfield, Dublin, Ireland) [UCD] does, in fact, have a mineral collection, and a large one. The alleged Michael Caine catchphrase, "And not a lot of people know that!" is, in this case, entirely apposite. I have talked to geologists even this year (2014) who were completely unaware of its existence. The second thing to state is that out of personal curiosity I have been looking into the origin of the name 'Cotterite' and, in the process, trying to find all extant specimens of this rare, metallic-lustred variety of quartz. I had a feeling that the UCD mineral collection might be hiding one somewhere. I did my PhD in UCD back in 1995 and am still welcome there(!), so I was allowed to look in drawers and places not looked in for many moons. My cotterite investigation was to have several unanticipated consequences, described in the two parts below. The first part is a revised version of an e-mail I sent in excitement to the Geo-Curators listserve group on December 5, 2013. The second part is what happened next. Read on.....

Part 1. I had a childishly thrilling experience on this cotterite project on a cold, grey December 2, 2013. I got permission from Prof. J. Stephen Daly, Head of School at the UCD School of Geological Sciences, to look through the school's mineral collections. The majority of these are stored in a large metal shipping container close to the school, which everyone is aware is not ideal, but with money being so tight nowadays there is no alternative. However, only some of this collection has been even roughly catalogued; large chunks remain completely unknown both to UCD staff and other geologists - indeed, there are sections that no living person has ever seen. I had a feeling that somewhere in there might be an undiscovered cotterite.

After 4 cold hours sifting through dust, rust, cobwebs, damp, and pyrite disease, and getting covered in the lot (and ruining what had been a good jumper), I miraculously found what I had been looking for. There lay a single, small group of cotterite crystals, with absolutely no identification or labels on it whatsoever [and no sign that there ever had been a label on it], in the middle of an anonymous old wooden drawer with other forgotten, unlabelled and unloved crystals. But I recognised it immediately. Fantastic!

Not only that, but I also found 7 historic specimens of killinite that still had their original labels. Nobody knew about these, either. Killinite was a relatively famous

mineral in the 19thC, being a then-new mineral that had been found in the Leinster granite (granite pegmatites, really) at Killiney, south County Dublin. Killinite made numerous appearances in many mineralogy books, geology texts, field guides, etc., and not just for Ireland. Unfortunately for Dublin mineralogy, killinite was later revealed to be nothing but spodumene that had altered to hydromuscovite .... and the name was subsequently discredited. But originally labelled 19thC specimens of 'killinite' are hard to come by, and UCD, to their surprise, now have one of the major collections anywhere. I also found a group of chalybite crystals that, according to its label [and happily this specimen still had a good label], had been donated to the Royal College of Science (Dublin) by none other that William G. Lettsom himself [he of Greg and Lettsom Manual of the Mineralogy of Great Britain and Ireland (1858) fame].

Many questions, potential historical investigations and a proper cataloguing project are raised by all this, but that might be some time off. Just no money for it.

But what a great 4 hours uncovering completely lost/forgotten mineral treasures.

Part 2. A few weeks after the above excitement, an Irish-based Belgian friend of mine, Michele Castiaux, notified me that the Heritage Council (HC) of Ireland would soon be opening up its annual round of applications by which one might apply for money to conserve, or do research on, aspects of Irish heritage, which includes geology. The HC have only a small budget and the window of opportunity to apply is 4 weeks: a period, one must remember, that includes the whole Christmas and New Year holidays, and yet all applications must be submitted on January 15, 2014. A tight deadline to complete a very lengthy and complex application form and its appendices.

Emergency discussions with Dr. Matthew Parkes (National Museum of Ireland) [NMI] and with Prof. Stephen Daly (UCD) led to me working over the Christmas putting together a grant application to, in effect, save the most endangered part of the UCD mineral collection - based entirely on what I had discovered that cold, but revelatory, day a few weeks before in December. As part of the application, I included some wonderful letters of support for the project, written in the nick of time, from Peter Tandy (British Museum of Natural History), Patrick Wyse Jackson (Trinity College, Dublin) and John Nudds (University of Manchester).

As was completely predicable, the last few hours work on the application had to be done on January 15th itself with the help of Matthew Parkes at the National Museum of Ireland premises - which is normally an uneventful four mile cycle from my house. On the way in, and with time now being of the essence, I hit a pothole and four spokes snapped in my back wheel resulting in the back wheel immediately buckling and me precariously wobbling down

the road like a two-wheeled blue blancmange, and worried that the whole wheel would now implode causing me to end up under a bus. Undaunted, I knew what was required: there was a vital application to be completed and walking was not an option .... so to hell with danger! I made it in without dying, and 3 hours later and with only a few hours to spare, Matthew and myself successfully completed the online submission.

I must now wait until late February to hear whether the project is to be funded and, if so, by how much.

Coda. This story very nicely demonstrates how a random, minor, chance event can give rise to potentially significant consequences. A 'feeling-in-my-waters' search for an obscure mineral in a leaky shipping container as part of a personal project might - subject to the Heritage Council's financial approval - have led directly to saving a large, historic, essentially unknown 19thC and early 20thC mineral collection. Fantastic!
Patrick Roycroft.

Experts required: CIRCA review, Doncaster

Below is some information about specimens or groups within our palaeontology collection, which through the CIRCA project have been identified as priorities for external specialist input. We have had an extension (until the end of May) to complete additional work, using an under spend of the original grant.

We are particularly keen to identify specialists who are willing to look at those specimens or groups identified in the attached document. What we are essentially looking for is a brief overview/assessment - highlighting specimens of significant research potential, identifying star specimens and providing up to date taxonomic identifications, and where possible provenance or other relevant information which can easily be gleaned. We can offer reasonable expenses to facilitate travel to Doncaster (travel fares and where necessary accommodation) or (where it is noted possible) arrange to transport the collection/specimens to the expert/ specialist.

We are looking for specialists to do this from now until the end of the 1st week in May (at the very latest) and can be flexible about days/dates.
Peter Robinson, Peter.Robinson@doncaster.gov.uk

List of collections (specimens) that may require further assessment:
1. Jurassic ammonites: There is a rather varied collection of Jurassic ammonites, from a variety of locations. The majority are from the Yorkshire coast, with several from Dorset. The quality varies, some specimens display fantastic detail and preservation. Provenance information is largely minimal, with perhaps e.g. 'Whitby' stated. Roughly 300 specimens. NOTE: Specimens cannot be removed and taken.

2. Carboniferous vertebrates: Most specimens are from local deposits collected during mining operations in the area, around 1910. The majority comprise fish remains, although there are some unprovenanced reptilian bones, too. Generally,

most specimens are represented by fragments, but some are fairly complete. Provenance information varies, some of the local material is quite well constrained. Some remains have been collected from across Yorkshire and Derbyshire. Roughly 50 specimens. NOTE: Specimens could potentially be packed up and taken away.

3. Permian limestone: As a local collection, the majority is from the locally famous site of Hampole, collected from the Hampole Beds. Most specimens include bivalves, though some bryozoa and burrows are also noted. Other remains are from localities also in Doncaster. Roughly 50 specimens. NOTE: Specimens could potentially be packed up and taken away.

4. Devonian fish: A decent collection of fish from famous localities in Scotland. The preservation varies with most being fragmentary or somewhat poorly preserved. However, some specimens are fairly large, complete and well detailed. The remains come from sites that are now, generally, difficult to access. Roughly 35 specimens. NOTE: Specimens could potentially be packed up and taken away.

5. Carboniferous mollusca: There is a large variation within this portion of the collection, representing many goniatites and orthocones. Sadly, most specimens have little to no information, but do appear to represent potential rarities. Some of the local remains are better provenanced. Preservation varies. Roughly 300 specimens. NOTE: Specimens cannot be removed and taken (unless a specific group is suggested).

6. Chalk fish: There are a few Chalk fish that are from unrecorded localities, probably from the south of England. Some of the remains are well preserved and may require further research. The preservation is moderate. Roughly 5 specimens. NOTE: Specimens could potentially be packed up and taken away.

Meet the committee

Dr Timothy A. M. Ewin Committee member

I joined the GCG during my first volunteering experience, identifying fossil plants at the Haslemere Educational Museum, over 10 years ago. However, my interest in museum geology started at a much younger age, collecting rocks and fossils as a child and visiting numerous museums, especially those stuffed with fossils and other natural history collections. I guess I knew Geology was my calling so I was very pleased to go to a school with a teacher (Mr Haddy) passionate enough to offer GCSE geology. Sadly, the subject was dropped two years later, so a Geology A level seemed doubtful. However, it was at this time that I had the very great fortune to find a brilliant and very competitively priced tutor; Dr John B Wilson of deep sea coral fame who gave me a wonderful introduction to Geology (as well as teaching me an A level). This spurred me on to study the subject at university and I got a place at Cardiff University where I developed an

interest in fossils plants under the guidance of Prof. Dianne Edwards FRS. This led to an MSc in Palynology at Sheffield studying Permian conifer diversity and then a PhD at the University of Manchester in partnership with Prof. Paul Kenrick at The Natural History Museum, studying Mesozoic conifer leaf morphology. It was whilst working in The Natural History Museum that my interests in museums came back to me.

So, like many now do, I started volunteering at a museum and Haslemere fitted the bill with its excellent natural history collections and galleries. I really enjoyed the work but I was surprised at the attitude of the museum sector towards curators, expertise and geology. "Collections for the future" had just been released and to a newbie it surprised me. It was Curator Ms Julia Tanner and other staff there who opened my eyes to the pressures on modern museums. From these experiences, I was offered my first job as Assistant Curator of Geology at Bristol City Museum (after applying for many other posts).

Bristol was where I cut my teeth as a curator and I undertook numerous digitisation, outreach and exhibition projects. After the curator retired I was promoted to manage the department. The highlights of my work at the time were the development of a touring outreach event based around an 8m long Pliosaur and the loan and public display of (arguably) the best preserved dinosaur ever found in Britain; a Scelidosaurus found by Mr David Sole and others in Charmouth in 2000. However, in 2008 I left Bristol for my boyhood dream job as a curator (Echinoderms) in the Palaeontology department of The Natural History Museum.

I have worked now at The Natural History Museum for 5 years, being promoted to senior curator last year and I have loved it. I have been lucky enough to do many highly enjoyable projects including collections development fieldwork and attendance at fossil shows in the USA amongst others. The museum has also kindly enabled me to set up the campaign for good curatorship to raise awareness of the importance of curatorial work in museums in partnership with the GCG and the Collections Trust in 2012. It was with this interest in promoting curatorship and expertise in museums that I have joined the committee of the GCG.

Whilst I have no specific post on the committee, as a co-opted member I have been tasked with pulling together an audit of geological skills and expertise possessed by members of the GCG and others in the heritage sector. The details are yet to be finalised however it is hoped that this will result in audit of skills. This skills inventory is important as it will establish base level information for any debate on existing expertise, identifying gaps and persuading additional resourcing. This is being done in recognition that geological curatorial skills are becoming rarer in the museum sector but that they are still vital for effective work in the sector.

It is also envisaged that the skills possessed by members of the GCG could be offered via an on-line resource to heritage organisations which may need to tap into it. I also feel that the establishment of this service is significant as it will demonstrate the relevance of geological skills and knowledge to museum services as well as instigating new dialogue with organisations that may have little idea about the importance of their geological collections and how to make best use of them; providing new opportunities for persuasion of allocating more resources.

Thereby, I hope that this project will not only raise the profile of the GCG but, by demonstrating the relevance of geological curatorial skills generate increased resources for geological collections. A questionnaire will be circulated in the future and I hope everyone will do their utmost to contribute to this important initiative. However, if you have any burning comments then please contact me sooner.

Meeting Reports

GCG 40th AGM 3rd December 2013, The Beaney House of Art and Knowledge, Canterbury

A hardy group of geological curators made the trip to the Garden of England for the 40th AGM of GCG, in the beautiful city of Canterbury. The meeting began with Philip Hadland and Martin Crowther from Canterbury Museums and Galleries service, introducing the Beaney and the local museums. As well as the Beaney, the service also includes the Canterbury Heritage Museum, the Canterbury Roman Museum, Herne Bay Museum and Gallery, and Whitstable Museum and Gallery. Between them, they hold 50,000 objects. The Beaney was founded by Dr Beaney ('Diamond Jim') who bequested £10,000 for a free library and museum for the people of Victorian Canterbury. The museum underwent an extensive renovation and extension project from 2009, and reopened in September 2012, funded by the interregional Treasures Revealed project. Canterbury Archaeological Trust excavations at the site revealed artefacts from the George and Dragon Inn from 1749, as well as a pie shop! The museum reopened with reinvigorated links with schools, universities and community groups.

'Rockband' is a recently completed HLF 'Your Heritage' funded project at Canterbury Museums, in partnership with Hampshire County Council Arts and Museums Service (HCCAMS), English Heritage Education Centre, Dover, Canterbury City Museums and Galleries Service, Painshill Park, Surrey and Vale and Downland Museum, Oxfordshire. The aim was for non-specialists to be able to deliver geology sessions to visitors. The project at Canterbury consisted of mobile learning kits and storytelling resources, and reached (via 10 volunteers) 450 participants, from primary school children to adults, including the blind and partially sighted. Consultants were hired in to produce the 'tabletop safari' kits, led

by Annette Shelford (now of the NHM, London). The major component of these was tactile geological maps made by Jenny Langley, with one produced for each partner, at a cost of around £5000 each. Canterbury's is a map of the bedrock geology of Kent, incorporating pieces of fabric from all the staff involved, complete with flaps and pockets in which to hide real rocks and fossils. Local archaeological sites were also included. The maps are highly detailed and very robust, for repeated handling by children. The packs also include a CD for staff, with all printouts, images and lesson plans needed, as well as a full key and various stories and trails that can be drawn out using the map, using hand specimens, models and quiz cards. The map was very popular and delegates were fascinated by the embellishments, such as the detailed coccoliths and echinoids in the chalk (pic of map).

Next was Mike Howe of the BGS, reporting on the methodology and utility of the virtually completed GB3D type fossil project, funded by JISC, which is to be found at http://www.3d-fossils.ac.uk. Some advantages of 3D models are:

- Archiving capability
- Communication and duplication
- 3D printing capability
- Ability to measure accurately
- Ability to section fossils
- Finite Element Analysis plugin

The project used a Canon EOS 5D camera linked straight to a PC and server so that images were backed up daily. As well as standard high resolution photos, red-cyan stereo anaglyph pairs were taken in JP2 format, using a see-saw to give just under a 4° angle each way, so 8° of rotation altogether. The 3D models are best viewed with MeshLab or SPIERSview. The latter was used on the Hereford Lagerstatte work, and was written by Mark Sutton of Imperial College. It can be used to section and measure models. The models themselves are made of point clouds, and the scanner measures the colour at each point and then fills in each polygon appropriately.

The American NextEngine 3D laser scanner was used for the scanning, and costs around £3000 to buy. It is very light and portable, and file outputs are .PLY, 3Dpdf and .obj. The laser within is the same sort as that found in a supermarket checkout, and so is not overly dangerous as long as it is not looked at directly. The scanner can handle fossils from 1cm to 1m in size. It is user friendly as build progress is shown in real time, with accompanying logs. Scans are performed from left to right as well as top to bottom to ensure full coverage. Holes can be fixed with the computer program, although if too large more scans have to be performed. The accompanying photogrammetry program, AgiSoft, is around £200 at full cost, although this can be reduced to £50-£60 for educational use. It can create a 3D model from 3 photos, and a good camera can sometimes give better results than the laser scanner.

A 'soft launch' of the project was done at the Lyme Regis Fossil Festival in May 2013, where around 1000 people watched demonstrations of a 3D printer and placed fossil magnets onto landscapes. The formal launch was in August at the BGS offices at the NHM, with press from New Scientist and the Telegraph present, among others. The website saw 2 weeks of sustained high visitor figures.

Models can be viewed on the website, with no downloading necessary. There is also an app. 3D printing options differ depending on the printer and material used. The Makerbot printer is just under £2000 currently, and it prints single-colour models. It works out the amount of material needed, as well as an appropriate framework for the model. There is a blog post on the website comparing different printer models. Costs vary from around £1 for a small model, although colour overlay can add £40. Replacement parts also need to be taken into consideration. Blog posts will continue to be added as the last parts of the project are completed, at the site here: http://gb3dtypefossils.blogspot.co.uk.

Tim Ewin (NHM) spoke next on his 'Campaign for Good Curatorship'. He has written about this in Coprolite number 69. This has been started to promote the crucial role of curatorship in making museums and collections useful, relevant and sustainable for public benefit. It exists:

- to encourage support for curatorship
- for members to connect, share views and debate the future of curatorship. (It is the only group to link up subject specialist networks)
- to articulate why general curatorship is valuable
- to create a critical mass for campaigns and more effective lobbying

Knowledge of collections is vital for effective museum services, and truly great museums need a balance of skills. The April issue of Museums Journal reported a decline in specialist curators: 35% in natural history, 23% in art and 5% in human history over the last 10 years.

There is no adequate definition of a curator in a modern museum context, with a multitude of titles (e.g. collections manager, director) encompassing or overlapping with the role. Tim is keen to hear views on this, currently being shaped on the webpage at http://www.collectionslink.org.uk/collaborate/my-groups/viewgroup/139-campaign-for-good-curatorship. In reality, curators recognise the value of collections through expertise in the subject matter, ensure collections are developed and remain relevant, make knowledge freely available and support colleagues, provide credibility, quality and authenticity to all work, and engage with communities. Curators underpin and build the three areas of museum work: collections care and management, exhibitions, and community engagement and outreach. They ensure important specimens are preserved and valued.

In the 'Britain Thinks' consultation by the MA and ACE in 2013, the top priority uncovered was experts in museums. In a separate MA poll 92% of people stated

that specialist curators are needed. However, little is being done to directly champion curators. 'Collections work' is promoted instead. The Museums 2020 report deliberately left out advocacy as it couldn't be succinctly summarised, and the provision of curators is not part of accreditation standards.

The loss of curators has serious impacts on society and museum services. The Campaign is national, and aimed at the museum sector and policy makers. Tim is encouraging people to join the campaign (see link above) and contribute by submitting ideas for best practice and needs of the sector, lobbying the MA and ACE for changes to reflect the importance of curatorship, and by signing the petition (https://www.change.org/petitions/great-museums-need-good-curators). Tim can be contacted at tim.ewin@nhm.ac.uk.

Giles Miller (NHM, GCG chairman incumbent) rounded off the talks with an account of the amalgamation and updating of the stratigraphical records of 300,000 objects. This involved the cleaning and transfer of 21,000 data records, and the building of a new stratigraphy module for the NHM EMu database. The old system consisted of data transferred across from one system to another, several times. There were many free fields which couldn't be mapped to the new fields required, and so the records were nearly impossible to search and had to be condensed to strings of data.

Firstly a script was run to remove duplicates, and then the 21,000 records were exported to Excel. Fields were then atomised to chrono-, litho- and biostratigraphy, and updated using an import tool. Duplicates were removed once more, and BGS terms were imported (from the lexicon). Lithostratigraphy presented particular problems as one unit would often have different time spans depending on its location. Biostratigraphic units can also be diachronous. The 'Stratigraphical Procedure' of Rawson *et al.* (2003) was used here.

It was also necessary to decide on a protocol concerning data entry, standardising issues such as square brackets used for original text, punctuation, the order of data, and the inclusion of higher terms such as Palaeozoic. Decisions were also required on how much interpretation to apply in the case of changes in definition, such as Danian, Cretaceous, and Quaternary. There is a risk of over-interpretation also, such as in the usage of the term 'Old Red Sandstone', assumed to be Devonian, but in reality also covers the Silurian. Litho- and chronostratigraphic dual terms, such as Liassic, Purbeckian and Wealden, were also a problem, in choosing which information to put with the specimens. Data hidden in notes fields was a big problem, along with old or regional terms, and when to use qualifiers (late, middle, early). Terms from Gradstein *et al.* (2012), 'The Geologic Time Scale' were used in the back end of the database.

Recommendations were:

- Do as much data cleansing as you can before migrating
- Record information verbatim
- Set out clearly how you expect future data to be entered
- Choose standards for chrono- and lithostratigraphy

- Don't use free text notes fields unless absolutely necessary
- Consider sequence stratigraphy and additional lithostratigraphic hierarchies.

Thanks must go, on behalf of the group, to Phil Hadland and all at the Beaney for hosting an informative and enjoyable meeting.
Sarah King, Curator of Natural Science, York Museums Trust

4th December 2013, Geological Curators' Group AGM fieldtrip to Folkestone or "fun in the Gault Clay".
December. Winter in Europe. Short, cold days, but the conditions are right for a GCG fieldtrip. This year we headed to the Kent coast at Folkestone, led by Phillip Hadland.

Working on coastal sites has its advantages and disadvantages. One of the disadvantages being tides, which today were not in our favour, as it was high-tide until around noon and not suitable for viewing the exposures in East Wear Bay near Folkestone. So for the first part of the day, we headed 8 miles Southeast of Canterbury to the village of Aylesham and Phillip's house where we viewed his fossil collection. Phillip has amassed a wonderful collection of fossils from the area we would be visiting later in the day. He showed us fine examples of ammonites, belemnites, crabs and lobsters. A few "mystery" items were passed around for identification, including what could be a dinosaur footprint. All his specimens are well curated and displayed in small cabinets or display cases, and all in his living room.

I think all of us could have spent much more time looking at Phillip's collection but we needed to head off to Folkestone at some time, so we grabbed lunch in Aylesham and then headed down the A2.

When we arrived in Folkestone we assembled near East Cliff Bowls Club where Phillip gave us an overview of the geology of East Wear Bay and Folkestone Warren. The coastline between Folkestone and Dover exposes rocks of Cretaceous age (142-65 million years old). Cliff sections in the west consist of 50m of Lower Greensand and Gault Clay. The Gault Clay exposures in East Wear Bay yield beautifully preserved fossils, including ammonites, bivalves and crabs and also marine reptiles including turtles, ichthyosaurs, plesiosaurs and pliosaurs.

The cliffs at the back of the Warren provide extensive, almost continuous, exposures of the Cenomanian, Turonian and Coniacian Stages of the Cretaceous Period (Lower, Middle and early Upper Chalk). Phillip explained that Folkestone Warren itself consists of a series of landslides that includes both Chalk and Gault Clay, and has suffered twelve major slips since 1765 and today has the main Folkestone – Dover railway line running through it.

From the cliff top we followed a path down to the beach and started making our way south along the foreshore. Phillip explained that the section in the Gault Clay, towards Copt Point, is also active and that recent slips should yield some good

fossils. Soon we all had our eyes scanning over the foreshore and the slumped clays finding a variety of fossils. Trowels proved very useful for prying out some fossils intact in blocks of clay, although it was easy to find whole and fragmented fossils washed out of the clays on the shore itself. Phillip found and almost intact lobster. On the way, he pointed out the various beds (Beds 1 – X) that are used to subdivide the Gault in this Section. We also saw the underlying Folkestone Beds with its greensands, a "sulphur band" with decomposed phosphatic and pyritic nodules giving a distinct yellow colour to the matrix, and the "mammillatum Bed" – a seam of coarse sand and grit with phosphatic nodules. We followed the shore as far as Copt Point where all of these subdivisions may be seen together.

As ever, time caught us up, so we retraced our steps back along the beach to where we had parked, and here we thanked Phillip for leading what was a very enjoyable fieldtrip, and for showing us his collection earlier in the day.

A selection of images from the day can be viewed on the Geological Curators' Group flickr page on the GCG website (http://www.flickr.com/photos/31948013@N04/)
Tony Morgan, World Museum, Liverpool.

Editor's Note
GCG's use of electronic communications have increased dramatically over the last couple of years. Much of the information for this newsletter was obtained a result of using the JISCmail forum and Facebook. At the same time a paper newsletter posted to members is becoming increasingly expensive. Worse still the more news we have, the more expensive it is to print and post.

I still believe we need a newsletter to pull together all of the news from the geological curating community, and the number of submissions we continue to have shows that it is valued.

GCG has decided to send out a questionnaire to our members about the possibility of changing to an electronic newsletter. The alternative is to raise subscriptions. Going electronic is not without some costs but should save around £1500 a year. We have had some ideas about using some of the saved money for things like awards. If you have any thoughts let one of the committee members know. Look out for the questionnaire, or better still attend our AGM in December 2-3rd where we will discuss these issues.
Helen Kerbey, National Museum Wales.