COPROLITE

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DROPPINGS FROM THE GEOLOGICAL CURATORS GROUP

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Subscriptions 2000: a reminder about the reminder

Subscriptions for this year were due on 1 January and a subscription renewal form was included in the November 1999 issue of *Coprolite*. Subscriptions remain at the same rate as last year, ie £10.00 for UK Personal Members and £12.00 for Overseas Personal Members. Committee has worked hard to keep subscriptions at this very reasonable level, but members whose subscriptions are overdue make this difficult. In order to reduce the costs to paying members for the publications we send to those who don't pay, the GCG membership list is being reviewed and those with subscriptions unpaid will be removed. If you have yet to pay, please do so as soon as possible by sending a cheque, payable to GCG, to Amanda Edwards, GCG Secretary, Department of Geology, University of Manchester, Manchester M13 9PL.

Newish publications

The geology of Britain. An introduction by Peter Toghill, 2000. Shrewsbury: Swan Hill, 192pp. ISBN 1 85310 890 1, £29.95.

Exploring geology on the Isle of Arran by C J Nicholas, 2000. Cambridge: Cambridge University Press, xi + 234pp. ISBN 0 521 63555 1, £9.95.

The culture of English geology, 1815-1851. A science revealed through its collecting by Simon J Knell, 2000. Aldershot: Ashgate, xxi + 377pp. ISBN 1 84014 625 7.

From the beginning by Katie Edwards and Brian Rosen, 2000. London: Natural History Museum, 72pp. ISBN 0 565 09141 7, £7.95.

Travels with the fossil hunters edited by Peter J. Whybrow, 2000. Cambridge: Cambridge University Press, xvii + 212pp.

Stone: building stone, rock fill and armourstone in construction edited by M R Smith. 1999. Geological Society Engineering Geology Special Publication No 16. London: The Geological Society, xx + 478pp. ISBN 1 86239 029 0, £89.00.

Fossil crinoids by H Hess, W I Ausich, C E Brett and M J Simms, 1999. Cambridge: Cambridge University Press, xv + 275pp. ISBN 0 521 45024 1.

Encyclopedia of Paleontology edited by Ronald Singer, 1999. Chicago: Fitzroy Dearborn, 2 vols, 1435pp. ISBN 1 884964 96 6.

British Tertiary stratigraphy by B Daley and P Balson, 1999. Geological Conservation Review volume 15, 388pp. ISBN 1861074697, £60.00

Fossil fishes of Great Britain by D L Dineley and S J Metcalfe, 1999. Geological Conservation Review volume 16, 675pp. ISBN 1861074700, £78.00

Caledonian igneous rocks of Great Britain by D Stephenson et al, 2000. Geological Conservation Review volume 17, 648pp. ISBN 1861074719, £65.00

British Cambrian to Ordovician stratigraphy by A W A Rushton, A W Owen, R M Owens and J K Prigmore, 2000. Geological Conservation Review volume 18, 435pp. ISBN 1861074727, £70.00

British Silurian stratigraphy by R J Aldridge et al, 2000. Geological Conservation Review volume 19, 630pp. ISBN 1861074786, £65.00

Musical Curators

Max Hebditch has been appointed Honorary Curator of the Philpot Museum in Lyme Regis; **Paul Stevenson** formerly at Bolton Museum is now Assistant Collections Officer (Geology) at Bristol City Museum and took up his post on 1 March; **Vicky Mason**, RIGS development officer with the Royal Society for Nature Conservation has left to work on an environmental enhancement project for the Channel Tunnel Rail Link; **Cally Oldershaw**, formerly in the Department of Mineralogy at the Natural History Museum has been appointed Research and Parliamentary Liaison Officer at the Geological Society.

Exhibitions 2000

Tracking dinosaurs Dudley Museum and Art Gallery, St James Road, Dudley until 3 September

Myths and Monsters Hancock Museum, Newcastle upon Tyne until 11 June.

Claws! Plymouth City Museum until 16 September.

Monster art Yorkshire Museum, Museum Gardens, York until September.

Jurassic Bolton Museum 17 June-17 September; Peterborough Museum, Priestgate, Peterborough 30 September - November.

Walking with dinosaurs Yorkshire Museum, Museum Gardens, York end July - 31 December.

An exhibition on the Far Side

The University Museum of Zoology in Cambridge is interested in bringing Gary Larson's *Far side of zoology* cartoon exhibition over from America for a UK tour if enough other museums are involved to make the costs feasible. Gary Larson himself is keen to see the exhibition tour in Britain or Europe. If anyone thinks that their museum may be interested, even in getting further information at this stage, please contact Dale Johnston at Cambridge University Museums on 01223 331104, email drj30@cam.ac.uk

RNLI Round Britain Walk 2000/2001

GCG member Martyn King and his fiancée Alison Shaw who set out from Liverpool on their Round Britain Walk on 1 January (see *Coprolite* 31, p.9) had reached Oban by late April. They are on course for the North West Highlands this summer as they continue their walk visiting all 185 of Britain's lifeboat stations.

Curatorial redundancies at BGS: Part 2

Following the note in the last issue of *Coprolite* about the collections at the British Geological Survey, one of the 19 staff being made redundant writes:

"The BGS Directorate has admitted that they 'took their eye off the ball' as far as the management and the development of the collections are concerned. They not only failed to foresee the concern that their actions would arouse but having under-resourced the collections for many years BGS now appears to be throwing resources in staff and money at the collections.

"Unfortunately it is too little, too late and at the wrong target. It is misguided in that the main need of the collections is not just a digital index but personnel who care about the collections and are knowledgeable and experienced in their management. The system of curation of the specimens and material in the collections has served its purpose and has been shown to be effective over more than a century. Nevertheless as in all systems with an historical element (like the transfer of collections between offices and the purchase of additional collections) there is a need for expertise in the particular collection. To lose the two most experienced curators by making them redundant seems rather shortsighted.

"Also do not be fooled in thinking that this is 'new money'. It isn't. It is the same fragmentary system that has caused the problem in the past. The collections resources consist of part of "A's" time, and part of "B's" time. The Collections Administrator had no authority over the collections other than the borehole collection and no resources in staff time or finances to address the problems of the collections. In theory the man-days may be there but not the knowledge, dedication and enthusiasm for the collections exhibited over many years by the curator of palaeontology and the curator of the borehole cores.

"As you said in your article there is a lack of understanding in the scale of the problem in producing a digital index for the collections. The BGS Director has been misled in the assumption that this will be achieved in three years even had the staff with expertise in running the collections been retained. BGS management has been seduced into thinking that all the problems of collection management will be resolved by having a whiz-bang website front end to the collection indexes. What they have not addressed are the hundreds of thousands of geological specimens with no locations in national grid terms, rocks without names and the lack of a responsive enquiry service to act as a guide to the collections."

Curatorial redundancies at BGS: part 3

Since the last issue of *Coprolite*, the British Geological Survey has advertised for the first of the new curatorial posts to replace those staff being made redundant. The post of Chief Curator, a 5 year appointment, was advertised on Paleonet, in the science section of *The Guardian* and in *Museums Journal*, but these advertisements produced no suitable external candidates and BGS has decided to readvertise. The word on the street is that there were only five applications; clearly, the background to the post is giving potential applicants some pause for thought. The job descriptions and skills specifications of the other curatorial posts for which the Chief Curator is responsible will be finalised once a Chief Curator has been appointed.

The job specification for the Chief Curator's post includes planning the integration of large donations and facilitating future large donations. It is not clear what this means; other than seeking to acquire large collections of borehole or other 'industrial' collections, surely BGS does not intend to set itself up as a centre for collections which would be better off in a registered museum.

The redundancies of curatorial posts were highlighted at a conference, *Ownership and access: who cares for Scotland's collections*, organised by the National Museums of Scotland, National Galleries of Scotland and the Scottish Museums Council in Edinburgh in November 1999. Charles Waterston, former Keeper of Geology at the National Museums of Scotland, questioned the standards of care for the Scottish type material in the BGS collections. Some 8,000 type specimens in the Survey collections in Edinburgh were transferred to Keyworth about 1993, despite much concern at the time from Scottish geologists and media. The then Director of BGS stated that the collections were being moved to "Keyworth where long-term curatorial resources are available to deal with its management". Mark Shaw, Director of the National Museums of Scotland wrote to David Falvey, BGS Director, to express the concern of this meeting.

In an interesting twist, BGS is to receive a £1.9 million rate rebate which certainly goes a long way to improving the Survey's immediate financial situation, and which will have a marked positive impact on its financial projections for the years

ahead. One might have thought that such a windfall would have encouraged the Director to lift the state of redundancy on the curatorial and other staff at BGS, but the Director adamantly refuses to do so. In a letter to GCG he states that he "cannot contemplate retreating from decisions already made". He has also informed us that "BGS Executive Committee and Board have agreed that all of these funds will be used to digitise analogue data and prepare a web-based site specific information service".

Curatorial redundancies at BGS: part 4

As we go to press, we understand that IPMS, the union representing the staff being made redundant at BGS, has heard from David Falvey that the Chief Executive of NERC has agreed to the state of redundancy being lifted immediately. Quite what this means to the staff who have now lost their jobs, and especially those who are about to, is not clear, but GCG will be seeking some clarification from the Director of BGS.

Bones and stones in Warwickshire

Warwickshire Museum is planning an autumn season of fossil-related events throughout the county. Nuneaton Museum will be playing host to Cardiff's *Tracking dinosaurs* exhibition during the run up to Christmas and this will be supported by a day school and other events at Nuneaton, currently being organised by the Warwickshire Museum and Open Studies Department, University of Warwick. Additionally there will be a travelling display of fossil bones for local libraries, supported by 'roadshow' days and a 'drop-in' session at the Market Hall Museum, Warwick

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The Peter Russell Rock Garden

At the University of Waterloo Convocation on 18 June 1999, Peter Russell, Curator of the Earth Sciences Museum at the University of Waterloo received the honour of being designated "Honorary Member of the University," for his work on the public awareness of science. The University of Waterloo also honoured Peter by naming the rock garden on campus "The Peter Russell Rock Garden."

In 1981 the University designed a garden to mark the 25th Anniversary of the founding of the University of Waterloo which was to be celebrated the following year. At a special event showing highlights for the coming anniversary celebration the architect unveiled a design for the garden which included rocks, an arbour, seats and trees. Peter Russell approached the architect and asked him what type of rocks were going to be used. The architect replied, "I don't know. We can't afford to install rocks". That remark was the seed needed to start the Geological Garden.

With the encouragement of the Earth Sciences department chairman, John Greenhouse and faculty member Roger Macqueen, a request for funding support was sent to the Canadian Geological Foundation in 1982 but the proposal was declined. Not to be discouraged, the request was resubmitted in 1984 and was accepted. Funds from Wintario and a bequest in memory of Malcolm Heaton, UW Alumnus, made the project viable. The initial plan included 12 rocks of an attractive and educational nature.

Our first collecting trip gathered 19 varieties of rock including jasper conglomerate, argillite and quartzites, Gowganda conglomerate, glacial striated quartzite, Jacobsville sandstone and basalt from the Sault St. Marie and Elliot Lake area. Gold ores from Timmins and Hemlo, anorthosite and iron ore from Wawa, banded iron formation from Timiskaming, Vermilion Bay granite, stromatolitic marble and amethyst from Thunder Bay rounded out the treasures from our two week effort.

Our initial gathering of 20 tonnes of rock continues to grow with new donations each year. Some donations are in memory of UW students and staff. One commemorates the 40th anniversary of UW co-op program and others are donated by mine owners. A piece of Canada's first decorative stone, serpentine marble used to decorate the Governor General's residence in Ottawa and dolostone used to build the Canadian Embassy in Washington, were donated by Arriscraft International of Cambridge, Ontario. Magnetite ore and andradite garnet skarn from the Marmoraton Iron Mine, were donated by Armbro Construction of Toronto. Ontario Place, Toronto donated rocks during removal of the "Ontario North Now" exhibit. This collection includes chalcopyrite, cobaltite, iron formation, gold ore, amethyst and nickel ore. The block of nickel ore from Sudbury was extracted in 1937 and shipped to France for display at the International Exposition, later it was returned to Canada. INCO was pleased to hear that the sample had found a new home and provided a nickel ingot plaque for the specimen. JM Asbestos donated serpentine and peridotite from their quarry in Quebec. Concretions were given by the Chippewa Kettle Point First Nation. Rocks donated by individuals include an attractive piece of layered Eramosa dolostone from Wiarton and green chromiferous serpentinite from Timmins. In 1998 a five tonne piece of sodalite syenite was donated by Andy Christie of the Princess Sodalite Mine, Bancroft, in memory of Elizabeth Edwards, long time staff member of the Earth Sciences Department. The garden now has over 50 tonnes of rocks. All rocks are labelled using cast bronze plaques detailing geological age, name, location and the name of the donor.

The initial triangular garden is devoted to Ontario rocks. Across a footpath another area has opened up. It includes rocks from Quebec, Labrador, Pennsylvania and British Columbia. A two tonne piece of limestone from the site of Canada's worst natural disaster, the Frank Slide in Alberta, was received in March 2000.

The garden is used to inform school children and other visitor groups about Earth materials and the geology of Canada. University students study the rocks in first year earth sciences courses. Students and visitors alike enjoy sitting in the attractive surroundings watching the resident squirrels.

When your name becomes associated with these projects people soon know whom to call. The Kitchener Parks and Recreation Department has asked me to help them work with Forwell Aggregate Company to rehabilitate an area gravel pit. These plans will include a rock walk gathered from regional glacial erratics which I chose for them in 1998. Once you plant the first rock the garden keeps growing. Gardening can take many paths.

Visit our Geological Garden virtually at: http://www.science.uwaterloo.ca/earth/museum/rgarden/rgarden.html
Peter Russell, University of Waterloo

Geological ethics

The regular Ethics Q & A column in *Museums Journal* highlights, in the May 2000 issue, the subject of buying specimens at fossil and mineral fairs:

Q Every year a number of commercial mineral and fossil fairs are held internationally. Dealers and private collectors attend them. We know that some specimens at these events are undoubtedly smuggled out of their country of origin. In some cases they were dug up in ways that irretrievably destroy contextual evidence. We reservedly condemn such practices. Is there not, however, a valid argument for museum palaeontologists at least to attend these fairs, if not to buy at them for their museums? Surely it is preferable for such material to enter a public collection where it can be the subject of proper research, rather than for museums to turn their backs and allow it to disappear into the cabinets of private collectors. What are your views?

A A common ethical question in all areas of human activity is whether or not ends should justify means. Buying and working with illicit specimens may advance your particular branch of investigation in the short term. But at what cost?

Liaoning is an area of China uniquely valuable for the rich palaeontological evidence it holds. A recent article in the national press told the story of how enterprising farmers in Liaoning learnt to exploit a lucrative Western market in fossils. Not only did they remove from context large numbers of 'decor fossils' for sale, but they started to 'create' specimens to meet demand. They developed a feel for what fossils trophy hunters craved and assembled a fake 'missing link' between dinosaurs and birds. It was smuggled out of China, sold at some commercial fair and duped some of the otherwise reputable popular science publishing community.

In this case, the private museum and the scientists involved thought they were working for the advancement of science. Seduced by the apparent significance of the specimen, they paid scant regard to the legitimacy of the item's extraction, its export or sale. Through its association with the illicit trade in natural history specimens and the circulation of scientifically misleading 'doctored' or fake items, one internationally-regarded publication paid a heavy price in loss of public credibility and damage to its reputation. Museums similarly tainted compromise public confidence both in the moral integrity of the museum and the material evidence it presents.

There may, perhaps, be some validity in the argument that museum staff should monitor what passes through commercial fossil fairs where illicit or illegal items are known to circulate. Buying at such events is, however, imprudent at the least and, in the opinion of many, irresponsible.

In cases like this it is well to remember that it isn't only science that can be ripped off by supporting a trade that decontextualises an irreplaceable cultural resource. The Chinese worker who prises the specimen from the rock face may be paid as little as $10 for an item that will fetch $10,000 in the West. When the fossils run out, that community has been robbed in more ways than one. And it is the end-buyer who is the main robber. That is not a role that any right-thinking curator should contemplate.

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Joint BGC, GCG, NSCG conference Scarborough 3-4 April 2000
Access to Collections

'Twas a cold, wet and windy night when only the most hardened of natural sciences curators and conservators braved the long trip to Scarborough. All survivors huddled in a pre-conference gathering in a local tavern, and swapped stories of bravery and lost directions.

The first day saw us seated in the plush surroundings in the Promenade Lounge at the large Scarborough Spa Complex, slap-bang on the sea front. Inferiority complexes soon vanished when we learnt the heating had broken down, and there were problems with the equipment. Still, being of stern stuff, and shunning suggestions of a move to warmer climes, we soldiered on, greatly helped by coats on laps, 'granny' style.

The conference was opened by an introduction by Harry Dixon the Mayor of Scarborough who told us a little about the richness of the local Jurassic coast. Rob Huxley chaired the first session, and after a few words about the NHM Darwin access project, 'was it a treat or opportunity?' handed over to Simon Knell, Department of Museum Studies, Leicester to explain 'What do we mean by Access'. Without succumbing to one credit card joke, Simon looked at how access

was typically divided into physical and intellectual access; however, today social inclusion is also included. A brief history of access and social inclusion and exclusion in museums followed, illustrating how museums were originally very much for social exclusion, until the end of the 19th century when social inclusion became a concern. Simon pointed out that thinking of social inclusion and ethnic minorities today may lead to tokenism. Instead Simon suggested looking at the non-visitors and think about community access. Simon went on to suggest that access is failing to give communities access to our 'world' or the activities we do, as well as the object themselves. We need to give access to our activities and try to increase our audience diversity.

With this for food for thought, the second speaker Joe Sage, from Dundee City Council Arts and Heritage gave us a contrasting practical talk on the dreaded 'Best Value' for museums. This was a very useful talk for all museums currently facing, or due to face best value evaluation. A description of what best value was and how they dealt with it at Dundee followed, with useful methodologies for reviews, how to prepare for best value, and the need for Critical Success Factors, to make you stand out from the competition. The talk was refreshingly very much on a positive note, and illustrated how a museum service can be strengthened from a best value review as long as it is well prepared before hand.

Filling the last slot before a much-needed hot coffee was Julian Carter from NMGW, with his talk entitled 'Hidden Treasure'. With the aid of some excellent pretty slides, Julian illustrated how conservation can make otherwise inaccessible specimens accessible to the public and researchers alike. Conservation can also help determine what you hold in your collections, and increase the value of these specimens. Many specimens with little data can be valuable as a handling resource once they have been conserved.

Despite having to fight with a slide projector with attitude, John Martin gave a excellent and very interesting talk looking at the 'Culture' question, and whether fossils should be included as cultural artefacts and therefore have exporting restrictions on them. John pointed out that this in fact leads to many scientifically important specimens being inaccessible to many top researchers and museums. It has also lead to the illegal trade in specimens, which some museums have to become involved in if they wish to obtain these specimens. John argued that Arts legislation should not apply to our scientific material.

Geoff Hancock then gave us an insight into the Zoology Insect Project at the Hunterian Museum. This was a Lottery funded project to make much of the university insect collection more accessible by firstly documenting the collection and then through display, and an accessible database. Being a university museum, the main priority for access is to the internal audience of students and researchers, rather than the traditional public audiences. However, the insect project served the university's internal needs as well as being part of the

Hunterian's outreach activities.

The BGC AGM followed, which at this point was competing with the sound of the waves crashing up against the conference walls. A much-welcomed lunch was then served, with delicious jacket potatoes with creamed cheese and a salsa sauce, which I feel really deserve a mention.

After lunch we had two talks looking at the education side of access, from Gillian Mason at the Hancock Museum, and Judith Scott ant the NMGW. Judith illustrated how natural history collections can be used to teach more than just science, and can be developed to look at other subjects, particularly numeracy, which is the governments current push. Timing ants and measuring killer whales were just some of the activities developed at the NMGW. Gillian described how the Hancock Museum tried to overcome physical limitations to access, by staging a peoples exhibition ' Objects of desire' and invited people from different local groups to come and choose objects from the collection for display, and say why they had chosen them. This allowed increased access at least to a small number of people who wouldn't normally be able to get into the collections.

We then had our second, rather more taxing theoretical talk of the day given by Andrew Newman of the Museum Studies Department, Newcastle looking at 'Messages from objects: constructions of identity'. Using museology-speak, he examined links between access to collections and identity. He identified identity as one of the few real contributions museums can make to communities; identity being who you are, which in turn is made up of environment, religion, and a sense of place. Natural science collections can help define the relationship between people and the environment and therefore add to identity. A link was also made between identity and social inclusion.

To round off the day, we then were treated to a talk about the local dinosaur coastal walk projects, from Alistair Bowden. As the project is still underway we were given a tantalising glance of what it will involve and the area and activities it will cover. The project was due to be launched in the summer, and utilised the spectacular Scarborough coastline, and geological localities. An evening constitutional to look at part of the walk was regrettably called off due to the ever increasing gales, rain and hail being deemed too much for our frost-bitten group.

In the evening those of us not installed in the posh St Nicholas Hotel with own sauna and swimming pool, braved the elements once more to attend the conference dinner held at the previously mentioned hotel. After being waited on, which was nice, the hardiest specimens went on to a nightclub, the moderately hardy relocating to a pub, and the wilting off to bed.

The new day brought more hail, but on the bright side, the heating had been fixed at the conference venue. After layer upon layer had been discarded by the

prepared few, we settled down to the first talk of the day from Bob Child, NMGW, tackling open storage and visitor access. Bob told us about how the NMGW were trying to make their reserve collections more accessible via open storage at a new off-site store. Accessibility was on different levels depending on security and conservation requirements however most object were on open view. Advantages and disadvantages of such a project were advanced.

The author must now apologise for the sketchiness of the remaining talk summaries, and plead ill health due to an unknown cause. Vicky Purewal, also from NMGW gave a talk looking at the keeping and providing access to hazardous collections. Some mercury and arsenic levels in some NMGW botanical specimens when tested were found to be of a hazardous level for contact. The air quality and contamination needed to be tested before curators could be allowed to return to work on the collections. This also causes a problem for loaning specimens! All historical collections should be seen as potentially hazardous, and health and safety procedures must be in place in order to continue access.

Hazel Newey from the Science Museum then told us about some of the science museums large collection stores, which allow access to the public, through small group visits. In total 680 visitors per year come on the guided tours, along with other curators, and corporate visits.

After coffee, came our second local talk, from Douglas Russell of Woodend Museum, Scarborough looking at the Scarborough access project, which involved documenting and improving storage of the Woodend Museum natural history collection. This collection had previously been stored to a large extent in black bin liners, which obvious badly inhibited access. The project has increased accessibility and discovered some hidden gems. The last talk of the day was from Caroline Buttler, the final speaker from the NMGW contingent. Caroline looked at how to cast a dinosaur trackway, and by doing this making it accessible to a wider audience for now and the future.

The afternoon was spent either on a trip to Whitby to see the impressive marine reptiles in their collection, or a tour round Woodend Museum, and the geological frieze in Rotunda Museum.

Overall, I felt the conference was highly enjoyable and informative dealing with several of the issues I think of as access, and others that I had not previously included. There was an excellent mix of speakers and topics, and a large turnout of delegates from GCG, BGC and NSCG. It was very nice to see such a mix, which I hope can continue with more joint events. A big vote of thanks must go to Nick Gordon, Leicester Museum & Art Gallery for all his work organising the event - shame he couldn't organise the weather too!

Glenys Wass, University College, London

GCG Seminar: Museum of Scotland and Dynamic Earth Edinburgh 10-11 May 2000

This aim of this meeting was to look at two new exhibition developments which have opened in Edinburgh recently, the Museum of Scotland and *Dynamic Earth*. The new building of the Museum of Scotland attracted much coverage in the national press, and this seminar and study visit provided an opportunity for some of us to see at first hand what the fuss was all about. *Dynamic Earth*, another new building, funded by the Millennium Commission, is an interpretive centre which uses state of the art design to tell the story of Earth processes and environments.

The first session of the meeting dealt with the new geology displays of the Museum of Scotland and opened with Mike Taylor from the National Museums of Scotland who explained the background to the new Museum and the geology gallery. The Museum of Scotland had a long gestation: a site on the corner of Chamber Street adjacent to the Royal Museum of Scotland (formerly the Royal Scottish Museum) was earmarked for a new National Museum of Antiquities of Scotland as far back as 1951. The site was cleared in 1970, but no further progress was made until 1990 when the Government announced funding for the new museum, to be called the Museum of Scotland. After a design competition, Benton and Forsyth was appointed architects, and an exhibition team began to prepare design briefs for a gallery on geology and the natural environment. In 1995 tpsDangerfield were appointed as designers for this *Beginnings* gallery. Much of the what was originally planned was cut and a new brief was produced.

As the architects' plans progressed, the initial space allocated to exhibition galleries changed, with space being lost as the front of the building was set back from the street, and architectural features limited the space available for *Beginnings*. The budget for the exhibition was £685,000 and the gallery has a nominal floor area of 310 m^2. The main aims of the gallery are to tell the story of Scotland's changing environments, plants and animals, linking this to continental drift and climate change; to provide a good, simple introduction to the Museum of Scotland, putting the human history galleries in their true context; to reach a broad audience, and make provision for primary and secondary schools; and to focus on specimens as evidence for the past. The tight space and firm storyline, meant that specimens had to be immediately understandable by the general public and anything not directly relevant to the main storyline was rejected. This meant using only Scottish specimens and making new collections where necessary, especially of large specimens.

Mike then looked at what he considered to be the successes of the gallery - a gallery that can be grasped in 5 minutes or 3 hours; a balance of actual, real evidence with its interpretation; a gallery for ordinary people; and open on time and to budget. He also outlined those areas which are less successful, and what he thought were the galleries failings, such as little integration of human and natural history, and a conflict in style and approach with the other galleries in the

museum.

Suzanne Miller of the National Museums of Scotland continued with 'The making of *Beginnings*'. Work had begun on the site adjacent to the Royal Museum of Scotland in 1995; excavations immediately uncovered a natural spring which soon filled the hole with water. Once this problem was overcome, construction work proceeded rapidly, but as the design and the space available to geology was continually changing, planning the gallery was difficult. By April 1997, the geology gallery brief was finalised and fieldwork begun to collect large display specimens, making use of Army airlifts and blowing up basalts. Suzanne described, to the mounting incredulity of the audience, the chaos of trying to install exhibits while the building was still under construction around them. One week before the opening date of 30 November 1998, half of the area for *Beginnings* had still not been handed over. From Suzanne's description, it was clear that someone somewhere had made some serious mistakes in project management, and it was only though the dedication of the geology and zoology staff, and their willing families who lent a hand, that *Beginnings* was completed. We have all sailed close to the wind with our preparations for a gallery opening, but the Museum of Scotland certainly took this to new heights.

Liz Hide, now of the Sedgwick Museum, but formerly of the NMS, spoke on 'Bringing the fossils alive: fossil reconstructions in the Museum of Scotland'. She stressed the importance of models, dioramas and reconstructions and how much they help visitors to understand that the vague marks on bits of rock were once living animals. She illustrated this with a model of *Westlothiana*, the early reptile known as 'Lizzie: The type specimen is on display, along with a wonderful model. Other original models commissioned by the NMS include the ammonite *Stephanoceras* to match a specimen from the Isle of Skye, belemnite models, and a diorama of a Lower Carboniferous reef, based on the fauna of the Petershill Limestone of the Bathgate Hills. In order to make the connection between living things and fossils, the reef is also shown in cutaway cross section.

After coffee, the second session, devoted to papers on recent developments in other institutions, opened with Tom Sharpe (National Museum of Wales) talking on 'Seven years of the *Evolution of Wales*'. This permanent geology gallery at the National Museum of Wales occupies the ground floor of a new wing built in the museum's rear courtyard. Unlike the Museum of Scotland, however, the building was completed before the gallery design was begun. The £1.6 million gallery, which takes visitors on a chronological tour through Wales from the Big Bang to the present day, was designed and built in just 10 months by Haley Sharpe Associates of Leicester. The gallery displays over 1500 specimens, and makes much use of film, animation, sound and lighting effects. Since the gallery opened, there have been a number of changes to the original design, especially around the entrance area which is a main passage between two wings of the museum and the museum restaurant. New specimens have also been acquired for the

exhibition, including a cast of the Condover mammoth. Not only has the exhibition evolved, but it has also spawned a Middle Eastern subspecies. In 1995, the *Evolution of Wales* provided the basis for the geology gallery of a new natural history museum in Sharjah in the United Arab Emirates. The Ruler of Sharjah toured the Cardiff exhibition and immediately appointed Haley Sharpe as designers and the Geology Department of the NMW as curatorial consultants. The basic layout and design elements of *Evolution of Wales* provided the basis of the new gallery. The Cardiff display is also being used as the inspiration for a new geological interpretation centre being established in St Johns in Newfoundland, and due to open in late 2001.

Edinburgh is also home to the exciting new earth science centre, *Dynamic Earth*, which was described to us by Stuart Monro. Opened in July 1999 and funded by the Millennium Commission, it is well on its way to exceeding its visitor targets for its first year. It uses a variety of presentational styles and aims to deliver big messages to lots of people. Interestingly, it does not do this through specimens. Plans for *Dynamic Earth* developed at the same time as those for the *Beginnings* gallery at the Museum of Scotland, and it was agreed that the two exhibits should complement one another. *Dynamic Earth* uses a number of spectacular, large scale audio-visual presentations which are much more of a shared experience than interactive exhibits. Now that the centre is up and running, Stuart described the challenges ahead, such as keeping up with rapidly changing science, making use of satellite links and harnessing the web. He described the ingredients for success as a successful merger of science and business strategy; of education and entertainment; of idealism and budget; and of differing personal skills.

Duncan Borthwick of the International Centre for Life described this new complex which opens in Newcastle on 27 May. With £70 million of lottery, Welcome Trust, and EU money, it comprises 5 separate buildings, including the first new public square in Newcastle for 100 years. There are clear parallels between the ICL and *Dynamic Earth*, and it appears that it aims to do the same sort of thing for the life sciences that *Dynamic Earth* does for geology. However, it does seem that they intend to make more use of actual specimens as well as spectacular presentation techniques. He described the challenges of interpreting abstract concepts, and dealing with problems of scale, and popular misconceptions. The aim is to balance content with visitor appeal, and to this end, science is not mentioned in the centre's marketing, and the text is written using the first person at a level understood by an 11 year old. Because of Newcastle's relative geographical isolation the target audience is a local one. It sounds like a fascinating development and would be worth a future meeting.

Following lunch, Mike Taylor led us around the *Beginnings* gallery in the basement of the Museum of Scotland. For most of us, this was our first visit to the new museum, and our first impression of *Beginnings* was how poorly sited it was, in the basement and hidden behind a lift. It is a difficult space, and you almost get

the feeling that geology wasn't really wanted within the new museum. Having said that, the gallery contains some spectacular exhibits and we were able to see the models and reconstructions which Liz had described in her talk, as well as some great paintings by John Sibbick such as graptolites floating in Iapetus Ocean, and Paleogene fissure eruptions in western Scotland. With these models, paintings, photographs and specimens, including the original specimen of *Westlothiana* do make this an exhibition of quality, not quantity. As Mike had described in his talk, the storyline had to be very specific and the gallery content is well-honed. One particularly interesting feature is the 'evidence trail' which is aimed at schools and families. A series of exhibits around the gallery contain one key object per section and a key question which sums up that part of the exhibition. It seemed a good way of emphasising that the story of Scotland's geology and landscape is based on evidence in the rocks. Production of videos for the exhibition was contracted out to BBC Scotland who have a major archive of Scottish landscape footage, so little new film was needed. The geology leads into *History of the wildlife*, the early fauna and flora of Scotland and includes a wonderful large diorama, using new taxidermy done in-house, and with interactive labels which reduce the need for large arrays of labelling.

Mike also showed us the museum's Discovery Centre, a hands-on children's activities room, before we returned to the lecture theatre for the final presentation of the day, Simon Knell of the Department of Museum Studies at the University of Leicester on Interpreting geology. This was a very stimulating and thought-provoking talk in which Simon explained how visitors construct their own meanings from exhibitions and how it is difficult for geology curators to see what the public sees in an exhibition. He also pointed out that the public appear not to like open storage which is much in vogue with museums at the moment. Through the use of a couple of videos, he illustrated how the message to be put across can be manipulated so that visitors or viewers take away the message we want them to take away.

The following day, we met Stuart Monro at *Dynamic Earth,* a spectacular building on a spectacular site, beneath Salisbury Crags, and opposite the site of the new Scottish parliament building. *Dynamic Earth* is a large, white, domed tent, set above a stepped amphitheatre. Inside, much of the ground floor is given over to a café, and this area can also be used for functions. The exhibit area is down a remarkably steep staircase, and after an introductory area on earth processes, you enter a time machine to travel back to the Big Bang, the first of several impressive AV presentations. Another, on volcanoes, comes complete with (a rather violently) shaking floor and smoke emissions. A third is an incredible 5 screen video of a flight over glaciers and glaciated landscapes; this was for me by far the most amazing and definitely quite breath-taking. In a section dealing with the polar regions is a large block of ice which encourages you to ponder on how it is maintained; another section has a reconstructed rain forest with regular rainstorms. Between these are other areas on the oceans, and on extinctions,

which, lacking the big-impact AVs are less impressive. The final area is a dome upon which images are projected and you are encouraged to lie on the floor to take in these images and the messages that come with them, and, in Stuart's words, just to "chill out". Stuart also took us behind the scenes where we saw the technology controlling the exhibits, as well as the education rooms. *Dynamic Earth* will certainly soon be ranked as a 'must-see' on any visit to Edinburgh, if it is not already.

Afterwards, I returned to the Museum of Scotland to visit the other galleries which exhibit the history of Scotland. The wealth of material on display is impressive, and, as a Scot I found many of the exhibits of great interest, but I felt continually disorientated. There are so many odd corners and areas of gallery tucked away, that it is difficult to view the exhibits in any systematic way without the help of a guidebook (which, like many visitors, I bought on the way out). On the plus side, this does give you the sensation of discovery when you pop your head round a corner and see something of interest, but it does not make for any sense of getting a feel for the history of Scotland. It is very much a place to dip into. The historical exhibits contrast with *Beginnings*, which is in a completely different style; *Beginnings* is more of a narrative, and a lot easier to follow (and not just because I'm a geologist). While the exterior of the building is impressive with its use of natural stone, the interior is less so, with large areas of bare concrete. The overall impression is that this is a building designed by architects for architects, and not for its users.

It was a great pleasure to see these exciting new developments and to hear about them at this excellent meeting. Thanks must go to Mike Taylor, who as usual had everything perfectly organised, and his colleagues at the National Museums of Scotland, and to Stuart Monro for taking the time to lead us through *Dynamic Earth.*

Tom Sharpe, National Museum of Wales

Forthcoming GCG seminars and workshops

5-9 October 2000 Munich, Bavaria, Germany

GCG study visit: The Munich Mineral Show and the museums of Bavaria

The Munich Show is Europe's premier fossil and mineral show and provides a excellent opportunity for curators to familiarise themselves with the current state of the market, or even to acquire material if purchase funds allow. In addition, this region of southern Germany has some spectacular geology, most notably the famous late Jurassic Lagerstätte of Solnhofen and the Miocene impact site of the Ries Crater at Nördlingen. Both sites have wonderful museums, with the Jura Museum in Eichstätt housing one of the few known specimens of *Archaeopteryx.* There will also be an opportunity to visit other museums and working quarries in the Solnhofen Limestone.

Thursday 5 October Meet at Stansted Airport for lunchtime flight to Munich.
Friday 6 October Visit to Munich Mineral Show Trade Day.
Saturday 7 October Travel to Eichstätt to visit Jura Museum, museums and quarries at Solnhofen.
Sunday 8 October Travel to Nördlingen to visit Rieskrater-Museum and field trip to examine the geology of the Miocene Ries impact crater.
Monday 9 October Return to Munich for free day or visits to the Deutsches Museum and the Museum of the State Geological Collections before late afternoon flight to Stansted.
Contact: Steve McLean, The Hancock Museum, Barras Bridge, Newcastle upon Tyne NE2 4PT tel 0191 222 6765, fax 0191 222 6753, e-mail s.g.mclean@ncl.ac.uk

14 November 2000 Sedgwick Museum, Downing Street, Cambridge GCG training course: Gemstone identification for natural science curators

This is the training course which was planned for March 2000, but had to be rescheduled as the course tutor was changing jobs.

A one-day workshop on the basics of gem identification, from the perspective of natural science curators. Participants will have the opportunity to use most of the simpler and more affordable instruments employed by gemmologists and will be able to examine some of the more commonly encountered gemstones and synthetic gemstones. Participants will also receive a pack of gem specimens which may be retained.

10.15 for prompt 10.30 start
Introduction and overview of gemmology & gem testing. Opaque gemstones. Getting clues using your hand lens. Use of the polariscope. How to spot glass 'gemstones'. Distinguishing amber from copal and plastics. Using 'heavy liquids' to test specific gravity (relative density) of gemstones. Gemstone curation. Use of the hand-held spectroscope. Use of the dichroscope and Chelsea Filter (if time allows). Demonstration of using a refractometer to discover the optical nature of a stone and measure its refractive index.
Course ends 16.30

Places are limited to 12 participants so it is advisable to book early. Participants should bring a hand lens (x10 or similar), a pen torch and tweezers. By the end of the course participants can expect to:

be able to use, at a basic level, the following gem-testing instruments: handlens/microscope; polariscope; hand-held spectroscope and 'heavy liquids'. Also dichroscope and Chelsea Filter if time allows;
have a basic understanding of what can be discovered using a refractometer (use of the refractometer will be demonstrated);
to know where gem-testing instruments can *also* be used to aid in the identification of *non* gem-minerals, especially where the specimen should be identified without causing damage;
be familiar with some of the features and properties found in a selection of the more commonly encountered gemstones (NB The short nature of the course will mean that participants should not expect to be able to identify with certainty more than a few specific gem species. Diamond and its simulants will also *not* be covered in this course);
be able to spot some of the most commonly encountered 'fakes', in particular glass and garnet-topped doublets;

know about good practice in the curation of gemstone collections;
know about what literature and courses are available for pursuing an interest in gemstones.

The course will be geared towards geological/natural science curators who encounter gem materials within their collections or as enquiries. No previous experience of gem testing is required. However, participants should have a science background and be familiar with the main properties of minerals, eg lustre, hardness, cleavage and fracture, and the terms used to describe them. Awareness of single and double refraction (isotropic/anisotropic minerals) would be beneficial but will not be assumed. The course will be very practical with the approach of 'What can the feature I am seeing tell me about the stone's identity?' rather than 'How do I *explain* the cause of the feature I am seeing?'

Included in the course fee is a pack of gem specimens which can be retained by participants.

Course fee: £16 Please make cheques payable to GCG
Tutor: Dale Johnston (Fellow of the Gemmological Association).

Please complete the form on page 23, and send it, with payment, to Dale Johnston, Museums Outreach Officer, c/o The Department of History & Philosophy of Science, Free School Lane, Cambridge CB2 3RH 01223 331104 **by Monday 7 November**

4-5 December 2000 Yorkshire Museum, Museum Gardens, York
GCG Seminar and 27th AGM : Dinosaur tracks, too big for their boots!

This meeting will give an opportunity to discuss the importance of trace-fossil collections and some of the problems associated with their collection, conservation and storage. Debate on the conservation of geological sites, whether they are RIGS, SSSI or unprotected will also be raised in the programme, given it is some time since this was discussed in detail in Cardiff, at the 'Future for Fossils' meeting. The new exhibition, *Walking with Dinosaurs*, showing the science behind the recent BBC series will also be on in the temporary exhibition galleries of the Museum. This will be an opportunity for many to see the work and research that went into the series. The exhibition will include debate on some of the more controversial elements of the series, such as the peeing *Postosuchus*. and the reasoning behind some of the relationships and behaviour of various groups of mammals, dinosaurs, flying and marine reptiles. The exhibition will also explore the importance of programmes such as *Walking with Dinosaurs* in supporting the public understanding of science.

Monday 4 December
10:00 *Welcome*
10:05 Tracking dinosaurs on the Yorkshire coast: Mike Romano, University of Sheffield.
10:40 Dinosaur tracks from Dorset: Paul Ensom, The Natural History Museum
11:15 Coffee (included in registration fee)
11:35 Dinosaur tracks, broken bones and helicopters: Neil Clark, Hunterian Museum, Glasgow.
12:10 Dinosaur-hunting on the Isle of Wight: speaker to be confirmed.
12:45 Hot buffet lunch (included in registration fee): served in the Hospitium in the Museum Gardens.
14:00 Track removal and casting in the Triassic rocks of South Wales: Steve Howe, National

Museum of Wales.
14:35 Dinosaur coast heritage project: Alistair Bowden, Dinosaur Coast Project Officer.
15:10 Walking in the footsteps of the dinosaurs: Phil Manning, Yorkshire Museum.
15:40 Tea (included in registration fee)
16:00 GCG 27th Annual General Meeting
16.30 Tour of the *Walking with Dinosaurs* exhibition.
17:20 Close of session.

19:00 Dinner and sampling of York Brewery's finest ales (NOT included in registration fee). Location of meal to be confirmed, please indicate when booking whether dentition is not adapted to flesh).

Tuesday 5 December
Port Mulgrave field excursion: Pack-lunch can be provided at cost, please ask Phil Manning for details of the culinary delights possible. This locality displays superb sections of the Lower and Middle Jurassic.
There is limited space on transport, so early booking is essential. The day will end in time for people to be returned to York Railway Station by approximately 6:30pm (dependent on requests for Whitby fish suppers!).

09:00 Depart from Yorkshire Museum.
10:30 Arrive at Port Mulgrave
15:30 Depart from Port Mulgrave
16:00 Whitby fish and chips (optional, but strongly recommended)
17:00 Depart Whitby
18:30 Return to York Railway Station

The registration fee for the meeting is £10 for the Monday session and £10 for the field trip (not including sandwiches). Places for the field trip are limited, so early booking is recommended. An accommodation list will be sent with any additional information on payment of the registration fee. Please complete the form on page 23, and send it, with payment, to: Phil Manning, Keeper of Geology, Yorkshire Museum, Museum Gardens, York, YO23 2RU, tel 01904 629745, fax 01904 651221, e-mail Dinosauria@tesco.net **by Monday 27 November**

Other meetings

27 June – 1 July 2000 Staatliches Museum für Naturkunde, Karlsruhe, Germany
5th European Workshop on Vertebrate Palaeontology
Contact: Dino Frey, Staatliches Museum für Naturkunde, Erbprinzenstrasse 13, D-76133 Karlsruhe, Germany tel + 49 721 175 2117, fax + 49 721 175 2110, e-mail dino_frey_smnk@compuserve.com

28-29 June 2000 Geological Society, Burlington House, Piccadilly, London
HOGG: Celebrating the age of the Earth
Contact: Dr Cherry Lewis, History of Geology Group, Wells Cottage, 21 Fowler Street, Macclesfield, Cheshire SK10 2AN tel/fax 01625 260049, e-mail

clelewis@aol.com

10-14 July 2000 The Natural History Museum, South Kensington, London
4th International Brachiopod Congress
Pre- and Post-Congress tours, registration forms and details from Sarah Long sll@nhm.ac.uk or Robin Cocks lrmc@nhm.ac.uk

10-15 July 2000 Halifax, Nova Scotia, Canada
***Society for the Preservation of Natural History Collections* 15th Annual Meeting**
Contact: Iris Hardy, Geological Survey of Canada, e-mail hardy@agc.bio.ns.ca or Alex Wilson, Nova Scotia Museum of Natural History, e-mail wilsonaa@gov.ns.ca

28 August – 1 September University of Portsmouth
***48th Symposium of Vertebrate Palaeontology and Comparative Anatomy* with 8th Symposium of Palaeontological Preparation and Conservation**
Contact: Dave Martill, School of Earth, Environmental and Physical Sciences, University of Portsmouth, High Street, Portsmouth PO1 3QL e-mail david.martill@port.ac.uk

30 August – 2 September 2000 Newton Rigg College, Penrith, Cumbria
3rd UK RIGS Conference: Geoconservation in action
Contact: Tania Stott, tel 01565 830009, email tania57@yahoo.com

6-12 September 2000 South Kensington, London
British Association for the Advancement of Science Annual Science *Festival*
Contact: British Association for the Advancement of Science, 23 Savile Row, London W1X 2NB tel 0171 973 3055, fax 0171 973 3051

6-30 September 2000 South Kensington, London
British Association: creating SPARKS
Contact: *Jill Nelson, British Association for the Advancement of Science*, 23 Savile Row, London W1X 2NB tel 0171 973 3055, fax 0171 973 3051, e-mail jill.nelson@britassoc.org.uk

13-15 October 2000 Dudley Museum
History of Geology Group: The Dudley gathering. A celebratory event to *discuss and relive Dudley's role in the history of geology*.
Contact: Graham Worton, Dudley Museum, St James's Road, Dudley

16-19 October 2000 Jersey
Museums Association 106th Annual Conference
Contact: Museums Association, 42 Clerkenwell Close, London EC1R 0PA tel 0171 *608 2933, fax 0171 250 1929*

18-19 October 2000 Cairngorms

Scottish Natural Heritage: Journeys through time. Interpreting a landscape fashioned by geology

This workshop, intended for those engaged in delivering face to face interpretive programmes, will cover the importance of establishing themes and objectives as well as the benefits and practical aspects of leading groups in the countryside. Using geology and landscape as a case study, it will provide participants with interpretive ideas, skills and information for developing their own events. Participants will walk one of the trails currently being planned and will have the opportunity, though feedback, to contribute to its development. A resource pack covering the geological features of the Cairngorms and a copy of the RIGS handbook will be provided as handouts.

Course fee: £70.00 (including lunches and refreshments, but excluding accommodation)

Contact: Sharing Good Practice Administrator, Awareness and Involvement Unit, SNH, Battleby, Redgorton, Perth PH1 3EW

4-8 December 2000 Melbourne, Australia

4th International Conference on Mineralogy and Museums

Contact: Bill Birch, Museum of Victoria, PO Box 666E, Melbourne, Victoria 3001, Australia fax + 61 3 9270 5043, e-mail bbirch@mov.vic.gov.au

2-6 April 2001 University of Oxford

Third International Conference on Trilobites and their relatives

Contact: Dr Derek Siveter, Geological Collections, University Museum of Natural History, Parks Road, Oxford OX1 3PW tel 01865 272953, e-mail Derek.Siveter@earth.ox.ac.uk

GCG Training Course
Gemstone identification for natural science curators,
Sedgwick Museum, Cambridge
14 November 2000
BOOKING FORM

Title.............Name...
Address...
....Postcode...................................
Telephone.. e-mail...

I will be attending the training course ☐
I enclose a cheque for £16.00 made payable to GCG ☐

Please return this form to Dale Johnston, Museums Outreach Officer, c/o The Department of History & Philosophy of Science, Free School Lane, Cambridge CB2 3RH **by 7 November 2000**.

✂ -

GCG Seminar, AGM and field trip
Yorkshire Museum, York
4-5 December 2000
BOOKING FORM

Title.............Name...
Address...
....Postcode...................................
Telephone.. e-mail...

I will be attending the seminar on Monday 4 December ☐
I will be attending the dinner on Monday 4 December ☐
I require a vegetarian meal ☐
I will be attending the field trip on Tuesday 5 December ☐
I require a packed lunch ☐
I require details of accommodation ☐
I enclose a cheque made payable to Phil Manning
for £10.00 (Monday meeting fee) ☐
for £10.00 (Tuesday fieldtrip fee) ☐
Total enclosed : £.................

Please return this booking form with your payment to Phil Manning, Keeper of Geology, Yorkshire Museum, Museum Gardens, York, YO23 2RU **by Monday 27 November 2000**

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