



OPROLITE

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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.

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Notice of Annual General Meeting

Please note that the **40th Annual General Meeting** of the Geological Curators' Group will be held at the Beaney Art Museum and Library, Canterbury, on Tuesday 3rd December 2013 at 4.00pm. Nominations for the posts of Officers and two Committee Members must be made by two members of the Group and submitted in writing to Helen Kerbey, National Museum Wales, CF10 3NP email hkerbey@museumwales.ac.uk. By 12th November 2013.

Membership

I am pleased to be able to say that membership rates will stay the same for the next year (2014)

Personal UK £15

Personal non UK £18, €25 or \$32

UK Institutional £20

Non UK Institutions £22, €32 or \$40

Optional unwaged rate £10

You don't have to wait to be asked to pay your subs – I'll accept them at any time. Alternatively you can pay by annual Standing Order: just ask me for a form. Please recommend membership of GCG to your colleagues, and other local institutions; we need an active membership base in order to hold meetings and workshops.

Cindy Howells, GCG Membership Secretary cindy.howells@museumwales.ac.uk

Musical Curators

Oxford University Museum of Natural History has been having a restructuring. Mineral and Geological Collections have merged to form the new Earth Collections, while Entomological and Zoological Collections together form the new Life Collections. **Monica Price** is Head of Earth Collections, **Darren Mann** is the Head of Life Collections, and **Kate Santry** is Head of the Archive and Library. Three new Research Fellows have joined the Museum staff, palaeontologists **Dr Tracy Aze**, **Dr Allison Daley** and **Dr David Legg**. **André Ashington** and **Paul Jeffery** have left the Museum, and are wished well in their new careers.

At the National Museum Wales the Geology and Biosyb departments are merging to become Natural Science. **Richard Bevins** is now Keeper of Natural Science. **Lin Norton**, Cartographer, and **Leonid Popov**, Palaeontology Curator are taking voluntary redundancy. After 35 years at the National Museum of Wales, former GCG Chairman **Tom Sharpe** left at the end of October to concentrate on writing, lecturing and geological interpretation. He has now become a Trustee of Lyme Regis Museum. He can be contacted at tom@tomsharpe.co.uk.

Roger Vaughan has retired after many years from the post of Geology Curator at Bristol City Museum & Art Gallery

Dr John Alan Gibson

We are sorry to have to bring news of the death of Dr John Alan Gibson of Kilbarchan, Scotland. John Gibson was a very long-standing member of GCG, although he had resigned his membership in 2009 due to illness. He had written many books and papers on Scottish natural history and was Chairman of the Scottish Natural History Library. He worked as the local family doctor as well as sitting on numerous committees, both medical and natural history.

Bob King (1923-2013)

Members will be saddened to hear of the death of Dr Robert (Bob) King. Bob was one of the founder members of the Geological Curators Group and a full obituary will appear in the Journal shortly. Bob was also the founder and architect of the Russell Society, a society dedicated to the study and conservation of mineral sites in Britain. He worked in and supported many museums during his career including the National Museum Wales, and the John Moore Countryside Museum. Despite years of poor health Bob maintained an interest in mineralogy and continued writing articles on the properties of minerals for the magazine *Geology Today* well into his 80s. In 2002 an unusual hydrated copper oxychloride mineral, discovered in a quarry in Leicestershire, was named in his honour - bobkingite.

Fossil, mineral and gem shows 2013

- 9-10 Nov** Cheltenham Racecourse. Rock & Gem Show
16-17 Nov Brighton Racecourse. Rock & Gem Show
16 Nov Haywards Heath Mineral Show. Sussex Mineral and Lapidary Society (www.sussexmineralandlapidarysociety.org.uk)
3-24 Nov Farnham Maltings, Farnham. Rock & Gem Show

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

Meeting Reports

Celebrating Dinosaur Island: Jehol-Wealden International Conference 20th-21st Sept 2013

Over 70 delegates gathered at the National Oceanographic Centre, part of the University of Southampton for a full day of talks themed around the stratigraphically coeval Wealden and Jehol biotas. The conference was also supported by the University of Southampton Confucius Institute which serves to promote and support Chinese culture and language in many UK universities. Amongst the attendees were several GCG members who contributed to the proceedings.

Jon Radley (Warwick) spoke about his work to resurvey many Wealden sites from Prof Percy Allen's 1975 model, in order to get them rewritten for the GCR volume published in 2012. Several of the old sites were cleaned up, and re-logged as part of this work.

Hugh Torrens (Keele) then described some of the early work on 'To-be-sauruses' – those later named as dinosaurian but prior to OWEN's 1842 invention of the word 'dinosaur'. These include primarily the *Megalosaurus* and *Iguanodon* specimens found in Sussex and the Isle of Wight. Although it is often quoted that Owen invented the name in his 1841 talk in Plymouth, he actually only proposed a new Order without actually naming it. The term 'Dinosaur' didn't exist until he wrote and published it the following year (1842), based on his observations of a common fused sacrum. This publication was in British Fossil Reptiles and the date is incorrectly given as 1841 on the issue, thus adding to the confusion.

Jeff Liston currently working in Yunnan, China, then explained about some of the legalities prohibiting export of Chinese fossil material. He suggested that collaboration with reputable institutions was the best way to go about working on such material, although occasional loans for up to 6 months may be given. However there would be multiple forms and permits needed, and advised getting every piece of paperwork translated and checked. No wonder smuggling of such material is widespread.

Mark Witton (Portsmouth) and Paul Barrett (NHM), then spoke respectively on pterosaurs and dinosaurs, reviewing the Jehol and Wealden faunas. Darren Naish gave a talk with local interest, describing the Isle of Wight dinosaur *Eotyrannus*. Dave Martill (Portsmouth) took us back to pterosaurs, comparing similar forms from each biota. Finally before lunch Martin Lockley (Denver) gave a presentation made by one of his Chinese colleagues and explained how rich Jehol ichnofauna sites can help with reconstructing the biota. Lunchtime gave a chance to look at a few displays of fossil material from the Isle of Wight, including the fused sacrum from one of the earliest 'to-be-saurs'.

An equally interesting afternoon kicked off with two talks by Chinese delegates Zihui Zhang (Beijing), and Dongyu Hu (Shenyang) describing some of their new Jehol bird fossils. Continuing on this theme, Colin Palmer (Bristol) discussed the aerodynamics of feathered dinosaur flight from an engineer's point of view. He concluded that although asymmetric feathers increase the wing area and allow better flight, a high speed launch is also important, such as jumping from a tree. Also, the hind limb feathers seen on many of these early feathered dinosaurs impart much more stability in a glide. Mike Howgate (London) gave the sceptics view of *Microaptor*, saying that, in his opinion, it and the other Jehol feathered dinosaurs were descendants of *Archaeopteryx* (and were therefore birds), as they illustrated convergent evolution. It was pointed out from the floor, that phylogenetic analysis put *Archaeopteryx* with troodontid dinosaurs and well away from the dromaeosaurid feathered dinosaurs.

The final session of talks started with Mark Young describing a large metriorhynchid crocodile, known only by a partial jaw section, from the Isle of Wight Wealden. The specimen was named the 'Shanklin Shocker' because of its size, and had been bought by the NHM in 1861. It may bring the latest date for metriorhynchids forwards by 10-15 million years, although a comment from the floor mentioned that there were derived Jurassic fossils within the Wealden and that its origin should be carefully checked. Stu Pond (Southampton) talked about the unique Early Cretaceous ichnofauna on the Isle of Wight and how low cost photogrammetric processes were being used to record the sites. Even fairly basic cameras can now take photos capable of being stacked in cheap, or free, software to produce 3D rotating images. Back to China with Martin Lockley and his talk on the diversity of trackways in the Jehol. There are over 100 Mesozoic track-sites, containing dinosaurs, birds, crocodiles and pterosaurs, some of which have now had large museums built over them for their preservation. He described dinosaur prints half the size of sparrow prints, dromaeosaur prints showing the 'killer' claw held up off the ground, and bird tracks bearing a striking resemblance to Road-Runner tracks.

Steve Sweetman (Portsmouth) gave a useful review of the fauna of the Wealden from the viewpoint of his micro-vertebrate finds. It is now thought there may be as many as 25 genera of dinosaurs on the Isle of Wight, but how are so many preserved in such a bad depositional environment – heavily oxidised overbank silts? The tropical Wealden environment was prone to fierce wildfires, and flash-

flooding. This results in large areas of ground being stripped of vegetation, then eroded, and concentrated in layers of flood deposits. Despite disarticulation, these fossils, of whatever size, can be found with the intense sieving that Steve carries out. This study has revealed a previously un-suspected great diversity of life. The talks ended with Pam Gill (Bristol) reviewing the mammals of the two biotas. Steve's sieving has revealed many new mammals, and the diversity here can be compared with that of Jehol, although with emphasis on slightly different forms.

Evening entertainment was suggested at a local pub where one of the PhD students was playing in a band. This proved to be the oldest pub in Southampton with great food, a lively atmosphere and the music was brilliant too !

Next morning about half the delegates met at the passenger ferry terminal for a quick transit to the Isle of Wight. Here we were met by the oldest coach-driver I have ever seen, who transported us for the day. Gareth Dyke (Southampton) and various colleagues escorted us along the beach at Yaverland and Brook to see the classic dinosaur sites, and we were treated to receptions at both Dinosaur Isle Museum and the Needles Park. At the latter we were also allowed to ride the chair-lift down to the beach after the public had left. Many delegates found small pieces of dinosaur bone to take away with them, and after catching a late ferry back to the mainland, we all left feeling we had indeed had a whistle-stop tour back to early Cretaceous times.

Many thanks to Gareth Dyke and all his colleagues, helpers and students, for organising such an interesting and informative conference. There was talk of it becoming a regular occurrence – I certainly hope so !

Cindy Howells, Department of Geology, National Museum of Wales

Report on 22nd Symposium of Palaeontological Preparation and Conservation (SPPC) at Edinburgh

The 22nd SPPC meeting was held on Tuesday 27th August at the Grant Institute, King's Buildings, Edinburgh University, with an attendance of ca. forty people. There were seven presentations during the morning (with two posters) and a visit to the NMS Collections Centre in the afternoon.

Following a welcome by **Vicen Carrió**, the morning presentations began with **Natasja den Ouden** and **Becky Desjardin**, of **Naturalis Biodiversity Centre, Leiden**. The Centre houses, amongst other things, a large collection of Permian reef fossils (brachiopods, corals, crinoids, blastoids, etc) from Timor, which were originally collected by two Dutch expeditions, led by Professor Molengraaff of Delft University ca. 1910 and Professor Brouwer of Amsterdam University in 1937. The collections from Delft, numbering some 36,000 specimens, and Amsterdam have been re-housed at Leiden and work is in progress to clean, re-pack with bar-coded labels and digitise them. This is part of a wider €30M project to digitise all thirty-seven million items in the collection, some of which is taking place in public view in the LiveScience hall. As data is captured on-line it can be viewed within the museum or at home.

Nigel Larkin, of **Natural History Conservation**, described his experiences of using a thermal camera, which he had originally used for monitoring heat-wastage in public buildings but had then realised could be used to record temperature variation in store-rooms. Relative humidity of a store-room is something that needs to be considered as specimens may become damaged if too moist or dry. A 1°C variation in temperature can cause a 10% change in relative humidity, and very often there may be temperature variations that are not apparent (e.g. due to hidden water pipes). A thermal camera can simultaneously record temperature of over 300,000 points within the field-of-view to better than 0.1°C accuracy and log the maximum, minimum and average of those points over time. So a thermal study may reveal problems that need to be sorted out or allow specimens to be stored more optimally. An entry-level camera costs £1,700, though better models are £3,600, or the expertise can be hired.

Jeff Liston, of **Yunnan University**, China, after expressing how pleased he was to now have a large office of his own with a view of fish ponds, went on to discuss the current position regarding the export and possession of Chinese dinosaur eggs. The export of dinosaurs has been illegal since 1982, though covered by a clause in the law concerning archaeological not palaeontological remains. Dinosaur eggs, strangely though, regarded as trace fossils, were not covered by the same law. A lucrative trade became established in the sale of dinosaur eggs, for instance by farmers in Nanying Province digging them up. Concern over this resulted in a new law in 1994, making the sale of eggs illegal. A further change in the law in 2011 prevented unnamed fossils from being sent abroad and introduced large fines. The current position is that dinosaurs acquired before 1982 or dinosaur eggs acquired before 1994 may be kept. The Chinese Government will try to repatriate material acquired after those dates.

Robert Nicholls, of **Paleocreations**, had been commissioned to produce models of a number of extinct species for the MUSE Science Museum in Trento, Italy. The steps he followed in producing a model were: study the literature and the fossils themselves; make a sketch of the anatomy and posture; produce a preliminary drawing, coloured in, for the customer's approval; make the sculpture and, finally; prepare it for shipment. He then went through some examples of constructing vertebrates (*Dunkleosteus*, *Ichthyostega*), 'exoskeletons' (*Wiwaxia*, *Marrella*), and 'softies' (*Anomalocaris*). He studied the gait of recent millipedes to get a realistic posture of some fossils. He also described trials to produce iridescence effects on a dragonfly (*Meganeura*) wing and the intricate cutting of green paper to produce an *Archaeopteryx* leaf. In the final stage the models have to be carefully wrapped and placed in boxes, with full instructions on how to unpack and re-construct them at their destination.

As an introduction to the afternoon visit, **Andrew Ross**, Principal Curator of Palaeobiology at **National Museums Scotland**, went through the background to the move of the Palaeontology collections to the new store. The old galleries at the Royal Scottish Museum were being restored, so the display collection had to be moved temporarily to commercial storage in Glasgow. Other items were stored

at six localities around Edinburgh. As part of the move an inventory was made of the contents of each box and a preliminary store plan produced, which detailed the requirements of drawer space, etc. Whilst the new store was being built, the location of each item was worked out. It took a year and a half to move the items into 1,400 drawers. The new store has good environmental control and plenty of power points for microscopes.

Donald Henderson, of the **Royal Tyrrell Museum**, Drumheller, Canada, described their attempts to estimate the weight of large vertebrates embedded in rock matrix. Such fossils are very often found in remote locations with no roads, so that extraction has to be carefully thought through. For instance, an elasmosaur found two hundred kilometres from Drumheller, in its jacket, weighed over four tons. Besides the equipment needed to extract the fossil, there are also problems of whether the storeroom equipment and floor are robust enough to bear the weight. Given that mass is the product of volume and density, the mass can be approximated if the volume of the irregular jacket can be gauged. A two-ton *Triceratops* in its jacket was used a test piece. The volume was approximated first as a parallelepiped, an elliptical cylinder and then an oblate ellipsoid. The latter gave the closest estimate. A plesiosaur, found near Fort McMurray Northern Alberta, with a highly irregular shape, was approximated by an irregular polygonal area with an average thickness.

Bernat Vila, of **Universidad de Zaragoza**, Spain, reported on the innovative use of expandable demolition agents (EDA) to extract fossils as an alternative to hammers or drills. These materials are not explosive: they act by exerting great pressure slowly when water is added to them. The effect is temperature dependent – slower at lower temperatures. He described how these were used to extract two Cretaceous fossils from the Southern Pyrenees. The first example was of a clutch of dinosaur eggs – a coating of silicone rubber was applied over the surface then a drilling machine was used to drill a series of holes into which about 10kg of EDA with water was added. When the agent had dislocated the fossil it was placed in a jacket and removed. The eggs have now been extracted and displayed base upwards. The second example was of a small reptile. This was extracted successfully in a similar manner, but was stolen overnight and found later in a gully. The thief had tried to break the fossil out of the matrix unsuccessfully.

Visit to the NMS Collections Centre: Lunch at the Collections Centre was followed by a guided tour of four departments. **Pete Davidson, Keeper of Mineralogy**, showed the Scottish mineral store. Of the ca. 70,000 specimens about one third are Scottish. They are stored in lidded boxes to keep them clean, using the Dana (i.e. chemical) classification. Humidity is controlled because some minerals can disintegrate if hydrated or de-hydrated. Radioactive minerals are stored in a different area with other radioactive material. Asbestos also requires special precautions, which have become even more stringent since new rules were introduced in 2012. The mineralogy and petrology stores are due to be moved together. **Andrew Ross** showed us round the **Palaeobiology** store. Some of the

larger trays can take weights of up to one ton. The move, as described in the morning, was now complete and, when everything has been unpacked, items will be put on a database. **Phil Howard** showed us the **Taxidermy** area. In the Skeleton Preparation Area specimens are boiled at 37° to remove the flesh then treated with salt and sodium carbonate to remove grease from the bone. All of the museum exhibits have been prepared here – we were shown a Red River Hog that had had the fur removed using a rubber mould to leave the skin behind (which would otherwise rot). Finally, **Vicen Carrió** and **Suzie Stevenson** showed the new Preparation and Conservation Area with its compressor and cutting equipment – there was a collection of large Scottish agates on view, which had been found in Angus when a road was being cut.

GCG are extremely grateful to the Edinburgh team, particularly **Vicen Carrió** and **Stig Walsh**, for their efforts into making this SPPC meeting such a successful and interesting day.

Jim Spenser

AFTER THE PARTY: A Personal Perspective on SVPCA 2013

The following is an article published by Jeff Liston on facebook about the Symposium of Vertebrate Palaeontology and Comparative Anatomy held at Edinburgh jointly with the SPPC.

This was a picture that I took on Monday 2nd September, on another glorious day in Edinburgh, just after the end of SVPCA 2013. If you look carefully past the Scott Monument, you can see the scaffolding being taken down from the Castle Esplanade used for the Tattoo, mirroring the large scale dismantling of Festival structures visible across the city that day. It was a real feel of 'The Party is over – until next year, when we will do it all again', and for me mirrored the post-SVPCA feeling perfectly.

So what is a personal perspective from an organiser? Well – as any of you will know if you have organised SVPCA or most other conferences before – you get a curiously inverted picture of a meeting, compared to anyone else. First of all, you really don't see any talks. Sure – you may be in the lecture theatre when they are happening, but that is usually because you have to stand up at the end of the session and make an announcement, usually something to do with lunches, t-shirts, buses or directions and timings – and that is what you are focussed on trying to remember. Another skewed perspective...is you don't usually pick up on what worked, but only see what didn't happen. Why couldn't I get the background slide to the IT guy at RSE, after taking it down there on the Wednesday morning (same for the podium laminates, frankly...) – or the conference photo, which was so heavily discussed beforehand, why did that not happen (it was scheduled for Thursday afternoon inside the RSE, and instead we improvised one at the Royal College of Physicians at the annual dinner – but to be fair this happens so often at SVPCA that we forget the photographs...sigh). And why, oh why, did some idiot break the seal (thus massively devaluing them) on the box of Havana cigars laid out for the auction – to see what could possibly be inside a sealed box of Cuban

cigars? Who could guess – Cuban cigars!!! As some of my people might say: 'shockerooni!'

Fortunately, as a delegate of the meeting, you have a different perspective. And that is why there is a roll of thanks that has to be rid, for the other people that possibly saw less of SVPCA than normal....

When I organised SVPCA in Glasgow in 2007, it was always very much with the real expectation that I could build on this for the next time the meeting came to Edinburgh, to make an even better experience. (I mean, if you can pull it off using the 'ugly sibling', then think what you can do with the really cute one, right?!) And I am extremely satisfied and happy that that is precisely what came to pass, under the judicious steering of Stig Walsh. The job of main organiser (or 'cross bearer') of an SVPCA is an extremely lonely one, and it can grind you down into an exhausted jellied mass, but Stig kept going right until the end, and I know how hard that is. (Apart from a few early meetings, I did not really start working for the conference until two weeks beforehand.) Truly, Stig, you were the warhorse on this one, carrying the biggest load, and you delivered it in abundance – a really excellent job!

I first suggested to Nick Fraser that we think about Edinburgh as a host venue in a bar (surprise) at Dublin SVPCA 2008. "Why?" he said, looking depressed "because it will almost certainly never happen." I think his reaction is a big indication of the organisational hurdles that he knew had to be leaped in order for National Museums Scotland to host this event, and it is thus a major tribute to Nick's leadership and determination, that he managed to make it happen: for my money, we ended up with a great combination of venues, that showed my city off to our visitors far better than if we had just been holed up inside the NMS for 4 days. And I really think that people got something much more positive and enriching out of that experience. So big kudos to Nick and Stig for securing such rich settings for our meeting, day and night. Vicen, as the sole 'survivor' of the Edinburgh 1999 SVPCA organising committee, was great – her energy, attention to detail and enthusiasm absolutely essential, and she delivered a great SPPC – the largest ever - in addition to keeping the rest of the meeting moving along. SPPC certainly has something to build on for next year, thanks to Vicen.

The whisky tasting was something that I had pushed for at this meeting for two reasons – firstly, I am a strong believer that SVPCA should have some sort of organised recreational event on every evening, to bring everyone together; secondly, it had been a huge success in Glasgow that I felt it was well worth repeating; and thirdly, Malgosia Nowak-Kemp had missed out on it in Glasgow due to being sidelined by Dave Unwin (which she still hasn't forgiven him for), so I wanted to give her a second chance.....alas, this was a 'Kemp-less' SVPCA, and all the sadder for it. At any rate, when it came to the point on the Wednesday morning when we had to decide whether or not to cancel (because we still had no-one to run the tasting), I felt that I had committed us to having a tasting, so it had to go ahead for the delegates – even if I had to do it myself (for the record –

the only whisky tasting I have ever attended was the one organised in Glasgow 2007....so you can probably guess how things would have gone!). Which brings me to Steve Brusatte – as glorious an addition to the Grant Institute of Edinburgh University, as he is an unlikely one (the Geology Department traditionally had an avowed hatred of all things palaeontological when I was an undergraduate there, and vertebrate workers were treated as the worst manifestation of that ‘problem’), his work to keep the meeting going, provide an excellent venue for SPPC and further support throughout was great – but my personal high acclamation for him comes for how well he rose to the challenge of being publicly ‘informed’ that he was running the whisky tasting with 4 hours notice. Sorry, Steve – I was let down by four successive people who were booked to do it, and I was rightly confident that you doing the talk would work better than I, and I know everybody really appreciated your work that night. [besides, you got to take home the remains of two bottles – not the Morrisons Own Blend one! – so what’s not to like?!]

I must also pay tribute to the other members of Palaeobiology in Natural Sciences at NMS – not only Andy Ross and Yves Candela for helping with the collection visits, but also Sarah Stewart, whose tireless efforts on a daily basis were fantastic (with her little friend Dennis, who so many of you took to!!) as well as assisting me like Dave Hone with the auction – and she was of course the designer of the highly successful meeting logo, making a temnospondyl out of the letters SVPCA (no mean feat without whisky....). And we would be so remiss to forget the stalwart work by the wonderful Rachel Russell, our departmental administrator, who kept our feet on the ground when the temptation was so strong to just run around like headless chickens: her clear-thinking and perspicacity was solidly reliable, and she found solutions swiftly to problems that we believed were intractable.

My first SVPCA was in Bournemouth 1998, and Stan Wood (who I shared accommodation with, along with Dave Norman – ‘with hilarious consequences...’ – it really should be a 1970s-style BBC sitcom) and Arthur Cruickshank, both lost to us last year, were a big part of that experience for me. Arthur in particular encouraged me to get involved when I would rather have sat back on the fringes – and he was still with us this year, not only through Enid’s presence throughout the Friday, but also in the material that we receive from her for the annual charity auction – last year in Oxford as well as this year – which made up a huge part of the final figure that we made at both events. Stan, of course, had a posthumous symposium to himself, this year – I feel something of a fool for not thinking to invite Matt Dale, current manager of Mr Woods Fossils, to participate in the symposium and give us that side of Stan, particularly as this is the 25th anniversary of that business. [again, you always see the things you forget, or miss, that seem blindingly obvious with hindsight....] But I think Stan would have found the idea simultaneously flattering and amusing: ‘Och, its just yer Uncle Stan, with some more of his fishes, just doing it for the Science....’, as he would have no doubt said.

Ok, let's finish on some positives: what four things am I most proud that we achieved this year for the meeting? Well

1) we had something organised on every night for people, which as I have already said, I believe is really important for the dynamic of the meeting.

2) The Auction result was truly excellent – at £1411, that has only ever been bettered by last year's result (which we were only about a hundred quid short of) in Oxford. With such dismal interest rates for the banks, we are no longer in the position of only being able to spend the interest of the Jones-Fenleigh account in order to give awards for people to attend SVPCA – now we simply have to rely on a large capital infusion every year from the charity auction, so please remember that next year and be generous. As an example, I gratefully acknowledge the Milners' taxon by taxon purge of their library which gave us a good supply of material for both this and last year's auction.

3) Another particular source of pride for me was the last minute inspiration for the t-shirt design, while it was just about to go to print, to change the colours so that it mirrored Alexander 2nd's Royal flag with a red Temnospondyl (rather than a Lion) Rampant on a yellow field.

4) Getting the Symposium name correct after years of errors: Stig Walsh's assiduous archival researches revealed that when it was held in Edinburgh in 1966/1975, it had been known as the Symposium ON Vertebrate Palaeontology and Comparative Anatomy....which of course makes far more grammatical sense than the 'Symposium of' that we have been using for the past decades.

Beyond that, I must express some regret and even responsibility for the lurgy that has supplanted the '2007 Glasgow muffin' with the '2013 Edinburgh PlagueCon', whose spread I believe was in no small part due to my disastrous recommendations of BrewDog. Because of course, once you are in BrewDog, as all the beers are new and completely different, you end up tasting each other's, and passing them around....and all it takes, is one of The Infected to be in the bar with you, and everyone is stuffed faster than in 'World War Z'. Unfortunately, BrewDog's deliciousness was our undoing....and if it's any consolation, I'm still trying to recover from said lurgy out here in Yunnan Province – maybe as a form of payback for all those bird flus that they keep sending us, I'm bringing them 'McBeerFlu'.....

So – a final thank you to all of you who came and enjoyed SVPCA and the experience of Edinburgh in Festival mode, and I hope you will come back. I know that we made a lot of new friends during that conference, who I look forward to seeing again. We smashed the delegate record for a SVPCA this year, and I'd like to thank each of you for trusting in us to deliver by signing up in the first place. And that means Phil – it's over to you for next year. With our very best wishes!!!

Jeff Liston

Publications

The Geological Curator Volume 9, No. 9 contains:

- The state and status of geological collections in the West Midlands and recent work to improve collections care by Holly Sievwright
- Preparation Of Europe's Largest Nest Of Dinosaur Eggs by S. Val, N. Guerrero, C. Cancelo, M. Valls, D. López, R. García and R. Sadurní
- **Gallery Review** - The Churchill and Sarsden Heritage Centre, Churchill, Oxfordshire by Owen R. Green
- **Obituary:** Philip Simon Doughty (1937 - 2013)
- **Lost And Found**

Got your copy? The Geological Curator is the journal of the Geological Curators' Group. See the beginning of this newsletter for membership options.

Geoconservation for science and society.

A special issue of the *Proceedings of the Geologists' Association* 2013 Vol 124 (4) Edited By Colin D. Prosser, Eleanor J. Brown, Jonathan G. Larwood and David R. Bridgland contains the following papers of interest:

Colin D. Prosser, Eleanor J. Brown, Jonathan G. Larwood, David R. Bridgland, **Geoconservation for science and society – an agenda for the future**, Pages 561-567

Colin D. Prosser, **Our rich and varied geoconservation portfolio: the foundation for the future**, Pages 568-580

Cynthia V. Burek, Neil V. Ellis, David H. Evans, Malcolm B. Hart, Jonathan G. Larwood, **Marine geoconservation in the United Kingdom**, Pages 581-592

Rory N. Mortimore, **Geoconservation and the advancement of geosciences: lessons from the Chalk of England**, Pages 593-611

David R. Bridgland, **Geoconservation of Quaternary sites and interests**, Pages 612-624

Jonathan Last, Eleanor J. Brown, David R. Bridgland, Phil Harding, **Quaternary geoconservation and Palaeolithic heritage protection in the 21st century: developing a collaborative approach**, Pages 625-637

John Powell, Gemma Nash, Patrick Bell, **GeoExposures: Documenting temporary geological exposures in Great Britain through a citizen-science web site**, Pages 638-647

Dave Williams, Dee Edwards, Moulding and cast replication of outcrops: a tool in geoconservation, Pages 648-652

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Murray Gray, John E. Gordon, Eleanor J. Brown, **Geodiversity and the ecosystem approach: the contribution of geoscience in delivering integrated environmental management**, Pages 659-673,

Martin J. Whiteley, Michael A.E. Browne, **Local geoconservation groups – past achievements and future challenges**, Pages 674-680

Graham J. Worton, Robyn Gillard, **Local communities and young people – the future of geoconservation**, Pages 681-690

Evelyn Miles, **Involving local communities and volunteers in geoconservation across Herefordshire and Worcestershire, UK—the Community Earth Heritage Champions Project**, Pages 691-698

Iain S. Stewart, Ted Nield, **Earth stories: context and narrative in the communication of popular geoscience**, June 2013, Pages 699-712

Lars Erikstad, **Geoheritage and geodiversity management – the questions for tomorrow**, Pages 713-719

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Other publications of interest:

CNMNC guidelines for the use of suffixes and prefixes in mineral nomenclature, and for the preservation of historical names by F. Hatert, S.J. Mills, M. Pasero and P.A. Williams. *Eur. J. Mineral.* 2013, 25, 113–115.

Lucy A. Muir, Jason Dunlop, Andrew Moore, Arthropod types from Sparth Bottoms in the Howard Collection (Rochdale Museum Service), *Proceedings of the Geologists' Association*, Volume 123, Issue 1, January 2012, Pages 165-169.

Philip Stone, Adrian W.A. Rushton, The pedigree and influence of fossil collections from the Falkland Islands: From Charles Darwin to continental drift, *Proceedings of the Geologists' Association*, Volume 123, Issue 3, June 2012, Pages 520-532.

Michael J. Benton, Naming the Bristol dinosaur, Thecodontosaurus: politics and science in the 1830s, *Proceedings of the Geologists' Association*, Volume 123, Issue 5, September 2012, Pages 766-778.

Michael J. Benton, Remmert Schouten, Edward J.A. Drewitt, Pedro Viegas, The Bristol Dinosaur Project, *Proceedings of the Geologists' Association*, Volume 123, Issue 1, January 2012, Pages 210-225.

David M. Martill, Dimorphodon and the Reverend George Howman's noctivagous flying dragon: the earliest restoration of a pterosaur in its natural habitat, *Proceedings of the Geologists' Association*, Available online 29 April 2013.

Øyvind Hammer and Jelena Spocova, Virtual whitening of fossils using polynomial texture mapping, *Palaeontologia Electronica* 16 (2) 4T

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New minerals approved for June 2013:

Diegogattaite, Na₂CaCu₂Si₈O₂₀·H₂O, Fluormayenite, Ca₁₂Al₁₄O₃₂F₂, Almeidaite, PbZn₂(Mn,Y)(Ti,Fe³⁺)₁₈O₃₇(OH,O), Minjiangite, Ba[Be₂P₂O₈], Ericlaxmanite, Cu₄O(AsO₄)₂, Kozyrevskite, Cu₄O(AsO₄)₂, Yeomanite, Pb₂O(OH)Cl, Kaskasite,

(Mo,Nb)S₂·(Mg_{1-x}Al_x)(OH)_{2+x}, Manganokaskasite, (Mo,Nb)S₂·(Mn_{1-x}Al_x)(OH)_{2+x}, Tissintite, (Ca,Na,□)AlSi₂O₆, Ahrensitite, Fe₂SiO₄, Hutcheonite, Ca₃Ti₂(SiAl₂)O₁₂, Qingsongite, BN, Zadovite, BaCa₆[(SiO₄)(PO₄)](PO₄)₂F, Gurimite, Ba₃(VO₄)₂, Yurmarinite, Na₇(Fe³⁺,Mg,Cu)₄(AsO₄)₆

Forthcoming seminars and workshops

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

GCG Seminar and 40th AGM 3rd and 4th December 2013

Beaney Art Museum and Library, Canterbury

Programme

Tuesday 3rd December

10:30 – 15.30 Presentations on Canterbury Museum and other topics

16:00 **40th AGM of the Geological Curators' Group**

Wednesday 4th December

Field trip to fossiliferous locations in the Cretaceous of the Folkestone area

Registration fee for Tuesday: £20 (including refreshments, excluding lunch). Cost for the optional field trip on Wednesday: £10. To book your place and find out more contact Jim Spencer, email: cheirotherium@gmail.com or check our website at <http://geocurators.org/>. See the **booking form at the end of this newsletter**.

Museums Association Conference & Exhibition 2013

The Museums Association Conference & Exhibition 2013 takes place at the BT Convention Centre, Liverpool on 11-12 November. It is the largest conference and exhibition for museums and heritage professionals in Europe. Over 1,500 senior staff discuss the latest issues, discover new practice and meet the world's leading suppliers and consultants.

The conference themes are health and wellbeing, museums of the future, and the emotional museum. Keynote speakers include Ricardo Brodsky, director of the Museum of Memory and Human Rights in Santiago, Chile, Lucy Worsley, writer, broadcaster and chief curator at Historic Royal Palaces, and Dan Jarvis MP, shadow culture minister.

There are a host of other sessions, practical workshops and training - all developed to facilitate fresh thinking. The networking events are at the International Slavery Museum and the Museum of Liverpool.

To find out more and to book your place, visit: www.museumsassociation.org/conference

Building the Bristol Dinosaur

Bristol's very own dinosaur *Thecodontosaurus* will be brought to life on the city's Harbourside this autumn when local artist Robert Nicholls and Pedro Viegas from University of Bristol build a full-size replica of the beast, based by the very latest scientific discoveries about how it would have looked when it roamed around Bristol 210 million years ago.

A series of free public talks by University of Bristol scientists about some of these discoveries, their laboratory work and their research will take place during the build. M Shed will also be putting on some inspiring family events, including opportunities for children to doodle a dinosaur and construct their own models.

The recreation of *Thecodontosaurus* is the culmination of a three and a half year project run by the University of Bristol and funded by the Heritage Lottery Fund. **The build begins on Tuesday 1 October at M Shed, Bristol's newest museum, and will run until the end of November 2013.** For the first time ever, members of the public are welcome to drop in and observe the reconstruction of the life-sized *Thecodontosaurus* and see the dinosaur come to life; admission free.

The Bristol Dinosaur was first uncovered in a quarry on Durdham Down, Bristol in 1834 and was only the fourth dinosaur to be discovered in the world. During the 1970s more bones were unearthed at a quarry in Tytherington, South Gloucestershire. The Bristol Dinosaur Project was founded in 1999 to discover more about the bones. Two earlier models of the dinosaur, dating from the 1980s, exist at the University of Bristol's School of Earth Sciences and a larger model, built in the 1970s, is currently on display in Bristol Museum and Art Gallery.

Both models reflect earlier assumptions about the dinosaur – for instance, the mistaken belief that it was a carnivore – and the environment it would have lived in. Advances in scientific knowledge since then have allowed researchers to study the remains in far greater detail and thus learn much more about how the dinosaur looked, walked and fed. It was through detailed analysis of the dinosaur's teeth that scientists discovered *Thecodontosaurus* was actually a herbivore.

The Bristol Dinosaur's scientific name *Thecodontosaurs antiquus* means ancient socket-toothed dinosaur. It was two metres long and lived 210 million years ago on islands surrounded by shallow, tropical seas. At that time Bristol was where Morocco in North Africa is today.

In 1999, the Bristol Dinosaur Project was set up to discover more about the bones and in 2010, the project received just under £300,000 from the Heritage Lottery Fund for further studies. Simply knowing that there was a dinosaur in Bristol wasn't enough for scientists; they now wanted to know what creatures lived alongside the dinosaur and what the environment they lived in was like.

With a much greater study and understanding of the whole ecological setting as the objective, a specialised fossil preparator was hired to build a new paleontological laboratory – one that would be up to the highest standards in order to accommodate the task of preparing four tonnes of rock. A dedicated educational officer was also hired to make knowledge about the recovered and studied material available to the public, enabling the people of Bristol to learn more about their very own dinosaur.

Pedro A. Viegas, Bristol Dinosaur Preparator at the University of Bristol: pedro.viegas@bristol.ac.uk

29th Society for the Preservation of Natural History Collections Annual Meeting, June 22nd–28th 2014. Historic Collections- Future Resource.

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

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. A number of themed sessions have started to be developed;

- **Advocacy and Natural History Collections:** This will be a special joint session with NatSCA exploring how to effectively promote the value of our natural science collections and associated expertise to policy makers and society alike.
- **University Museum Challenges:** A session to explore the wealth of collections that are part of our universities and the challenges they face.
- **Historical Insect Collections:** This session will be an opportunity to indulge in things entomological!
- **Managing Cultural Heritage in the 21st Century:** Managing the physical and digital resources of our natural history heritage is a daunting task. This session will explore the issues and how it can be tackled.
- **Access and Outreach:** A session dedicated to exploring the use and value of natural history collections in learning and outreach.

Historical Special Collections: An opportunity to focus on topics around the conservation and management of the historical or artistic collections found in our institutions that offer connections across many sectors of society.

In addition there will be range of other themed and open sessions developed around the presentations submitted, along with live demonstrations of software, technology and equipment in the 'Democamp'.

Workshops are an important part of the SPNHC conference. For 2014 there will be a full workshop on 'Shipping Legislation' and natural history collection material. The legislation that affects how we can ship natural history specimens around the world is complex. This workshop will look at the issues and bring attendees-up-to date with current practise. Other potential workshops are in planning but currently require confirmation. These potentially include some 'Best Practise' workshops, practical workshops on mount preparation and a session on 'Photon Physics' sponsored by Bruker.

A Range of field trips will be on offer, ranging from days out to a few a hours visiting the local area.

- Big Pit and the Blaenafon World Heritage Site: Big Pit is a museum dedicated to the history of coal mining in Wales. The museum is part of National Museum Wales and offers the opportunity to take a trip deep underground into the original coal workings. The area itself is now a world heritage site due to its former industrial heritage and now forms a classic post industrial landscape typical of the South Wales Valleys.
- The Botanic Garden of Wales: Situated a little more than an hours drive away from Cardiff is the National Botanic Gardens of Wales. The day trip will be an opportunity to explore the work of the gardens, the grounds and its architectural centrepiece greenhouse.
- Glamorgan Heritage Coast: In the company of our geologists explore the superb coastline of the Heritage Coast and experience the grandeur of the Severn Estuary which has the second highest tidal range in the world – up to 14meters on a good spring tide!
- The South Wales Coalfield Geopark Project: This fieldtrip will explore the coal geology of the region and look at an innovative project to interpret how the pursuit of coal has affected the people and landscape of South Wales. Shorter trips will include trips to a local wetlands for the birding community and some fun local walking tours including an introduction to the Welsh language or a 'Taith Iaith'!

Collection tours are always an integral part of the conference. Opportunities to visit the collections will be available on a number of different days. The National Museum Wales is a multidisciplinary museum and we will look to include opportunities to visit the Art and Archaeology collections as well as our large off site store housing much of the social history and industrial collections.

The meeting prides itself on being an open and welcoming conference. There will be opportunities for people new to the conference to get together and meet the conference regulars with a number of 'newbies' events. The opening social event will be the traditional 'Icebreaker' and this will be held in the Main Hall of the National Museum Wales. This will be an opportunity for faces old and new to get together and get the conference going! The banquet is also booked, and will be held in a central Cardiff hotel, The Park Thistle, which has excellent access and a

superb wood panelled room for the feasting and dancing. The menu will have a Welsh flavour and we'll be aiming to keep the cost as low as possible.

The website will soon be up and running but in the meantime you can follow us on twitter at @SPNHC2014, or on facebook – search SPNHC2014. The organising committee can also be contacted via julian.carter@museumwales.ac.uk. We look forward to offering a warm 'croeso i Gymru' / 'welcome to Wales' in 2014!

Items in the news

The "Pink Star", a 59.6-carat diamond, going to auction in November

November 13th will see a 59.60 carat oval cut pink diamond going up for auction at Sothebys in Geneva. The diamond is said to be the most expensive ever auctioned and is valued at more than £40 million. David Bennett, chairman of Sotheby's Switzerland, said the vivid pink diamond is "of immense importance" because of its extraordinary size and exceptionally rich color that surpass all others known to exist in government, royal or private collections. He said it is "simply off any scale, and passes, I believe, into the ranks of the earth's greatest natural treasures."

Montana Duelling Dinosaurs could fetch \$9m at auction

Fossil remains of two dinosaurs apparently locked in battle are to be auctioned by Bonhams in New York in November. The specimen contains some of the most complete and well preserved dinosaur skeletons ever found and is expected to make in the region of \$7m-\$9m (£4.4m-£5.7m). The so called "Montana Duelling Dinosaurs" contains the herbivore *Chasmosaurine ceratopsian* and the predator *Nanotyrannus lancensis* only known from fragments of bone before now. Phil Manning from the University of Manchester has had access to the fossils and said that the Montana fossil is the best evidence yet that this predator is a new species, rather than just a juvenile form of T rex, which is the suggestion from some palaeontologists. Teeth from the nanotyrannus were found embedded in the neck of the ceratopsian, suggesting the two were fighting when they died.

Regarding the sale in an open auction Michael Benton, a professor of vertebrate palaeontology at the University of Bristol, said "the risk with some heavily hyped sales, such as this sale of the nanotyrannus specimen, is that a private purchaser might wish to keep the specimen for their own use. If it is in a private collection, it cannot be studied scientifically. Nearly all scientific journals require that specimens studied scientifically and published must be freely available for further study by others, and this means an accessible, public collection. This is a basic tenet of science: the need to make all published work repeatable."

Jack Ashby, manager of the Grant Museum of Zoology at University College London, said scientific institutions were often priced out of the market on the biggest sales. "Even if a private buyer allows scientists to study something after the purchase, there is no way to control what happens to it later," he said. but very often new debates arise years, decades and centuries later and the specimen

needs to be revisited. If the fossil moves into private hands, this could very easily become impossible." From theguardian.com

Museum news

Buxton Museum & Art Gallery has been awarded a Stage 1 pass from the Heritage Lottery Fund to explore digital access to the collections, not just inside the museum, but outside, where artefacts were discovered or created. Digital media and mobile technology will allow users to access information whilst exploring the landscapes of Derbyshire and the Peak District. The geological collections at the museum are amongst its most significant and it is expected that numerous fossils, minerals and archive material will be integrated into the project, including collections relating to the work of Professor Sir William Boyd Dawkins and Dr J. W. Jackson. Pilot projects are due to begin soon and will include a Dovedale trail, where the geology of the region will be explored in conjunction with archaeological remains and landscape art. These pilots will inform a Stage 2 HLF bid which, if successful, will roll out a major digital project from September 2014 as well rejuvenating the displays of collections inside the museum.

Project partners are still being sought. For more information e-mail **CITL@derbyshire.gov.uk** or visit the Collections in the Landscape Blog: **<http://collectionsinthelandscape.wordpress.com>**

GCG Launches new blog at geocollnews.wordpress.com

GCG have started a new blog highlighting the applications of geological collections. The aim of the new site is to be proactive in gathering information on collections use and importance at a time when we are increasingly threatened with cuts and being asked to justify resources allocated to collections management. If you have any stories you think would make a good subject for a blog item then we would be glad to hear from you either via JISMAIL or directly through the blog.

Keep in contact

Web site: Geocurator.org

Facebook: Geological Curators' Group.

Twitter: OriginalGCG and hashtag #GCG.

Geocollnews.wordpress.com

**GCG Seminar and 40th AGM
Booking Form**

I will be attending the Seminar and AGM on December 3rd

I will be attending the field trip on December 4th

I would like details of local accommodation

I enclose payment for £20 (Seminar) or £30(Seminar & Field Trip) - please delete as appropriate

Title Name

Address

.....Postcode

TelephoneE-mail.....

Any Special Dietary Requirements

Any Mobility Difficulties

✂.....

Please return this booking form with a cheque for the appropriate amount, made payable to "Geological Curators' Group" by 25th November to: Jim Spencer, 3 Merlyn Court, Austin Drive, Didsbury, M20 6EA. Tel: 0161 434 7977. E-mail: cheirotherium@gmail.com



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