

A photograph of a geological rock outcrop, likely a sedimentary rock face, showing various layers and textures. A geological hammer is placed against the rock face for scale. The hammer has a black handle and a metal head. The rock is light brown and tan, with some darker, more crystalline areas. The background shows some green vegetation and a clear sky.

CHARNIA

***The Newsletter of the Geology Section (C) of
the Leicester Literary & Philosophical Society***

www.charnia.org.uk

SEPTEMBER 2013

Editorial September 2013

Another field season has come and gone, and we can look forward again to our winter programme. This year saw the excursion programme beset with various vicissitudes, some because of the inevitable problems that always come along when there is a change in field secretary, and others due to the unreliability of locality contacts. But another problem is increasingly rearing its head as time goes by. We live in the era of health and safety, no-one can avoid the government's injunctions to tighten every loophole and cover every eventuality. Quarry owners, like everyone else, are having to look carefully at any potentially dangerous area, which in effect means their whole operation, where safety can be compromised. Loose cannons, like visiting geological parties, have become a perceived threat, and that is not to be wondered at with all the potential litigation and financial penalties that result from accidents. Party members tend to wander off, approach unstable faces, go in pursuit of specimens that are just out of reach, fall into sumps and deep mud, the list is endless. We all know the risks and do what we can to minimise them, but no-one can blame the owners and managers for being nervous. Another major problem is the 'lone wolf', the person who believes that the rules don't apply to them, and who merrily proceeds to enter quarry premises clandestinely out of hours or at weekends. Such a person is a complete menace and I know of at least one excellent quarry that is out of bounds to all now that one of these idiots has had an accident whilst trespassing. The outcome of all this was inevitable – it is becoming more and more difficult to gain entry to quarries and other private geological sites, particularly new ones that we haven't visited before. Some owners have a blanket policy, at the very least, of non-cooperation, if not outright refusal. E-mails are ignored, phone calls not returned, arrangements changed. Not least of the owner's concerns is the health and safety paperwork involved in clearing a visit, they simply don't want to bother with it. What can we do? I think it's all down to careful nurturing of relationships with managers and key quarry personnel, a talent in diplomacy is called for; also, our behaviour when onsite is crucial, we must show how responsible we can be, and we must make it clear that we appreciate being allowed into their domains. I also have to say that the Geology Section has an enviable safety record and our behaviour, to my eyes, is also exemplary. Lets keep it up and I'm sure those quarry visits will continue.

As for the Winter Programme, once again the Chairman has sought out the very best for us, with a special emphasis on interesting topics that go a little beyond the 'norm'. We begin on October 2nd at the usual venue (this talk may have taken place by the time you read this). Arrangements for the Saturday Seminar are progressing satisfactorily at this stage, and we've got an intriguing topic for you in 2014 – seaside geology. The actual title may well turn out to be something like 'What we did on our holidays – the best of Britain's coastal geology'. The seminar will take the form of lectures ('day trips') to seaside localities that are dear to our hearts as resorts or popular holiday areas. We hope to engender an atmosphere of 'jolly holidays', yet, of course, the talks will be as professional and full of cutting-edge geology as they always are.

Andrew Swift

Winter Programme 2013-14

All talks are held at 7.30pm in Lecture Theatre 3, Ken Edwards Building, on the main University of Leicester campus, except where stated. Refreshments served from 7.00pm.

Details: Chairman Joanne Norris, j.e.norris@ntlworld.com, 0116 283 3127

Wednesday October 2nd

Dr Marie Edmonds (Department of Earth Sciences, University of Cambridge). **Explosive volcanic eruptions: controls on lava fountaining at Kilauea Volcano, Hawaii.**

Wednesday October 16th

Professor Adrian Lister (Department of Palaeontology, Natural History Museum). **The natural history of the Mammoth.**

Wednesday October 30th

Dr Jonathan Lee (British Geological Survey, Keyworth). **Buried valleys of East Anglia – ancient rivers and ice sheet drainage networks.**

Wednesday November 13th

Dr Mike P. A. Howe (British Geological Survey, Keyworth). **Laser scanning & 3D printing 563 million years of evolution: the JISC GB/3D type fossils online project.**

Wednesday November 27th

Dr Timothy Farewell (National Soil Resources Institute, Cranfield University) and Dr Martin Whiteley (Bedfordshire Geology Group). **The mapping and understanding of landscapes, geology and soils of Bedfordshire & Cambridgeshire.**

Wednesday December 11th

Christmas Meeting, **New Walk Museum, Leicester.**

2014

Wednesday January 15th

Dr Jan Zalasiewicz (Department of Geology, University of Leicester). **The planet in a pebble.**

Monday January 20th

Parent Body Lecture, Hugh Aston Building, De Montfort University, Leicester. Professor Richard Fortey (Earth Sciences Department, Natural History Museum). **Living fossils.**

Wednesday January 29th

Jonathan Paul (Department of Earth Sciences, University of Cambridge). **A history of London's water resources.**

Wednesday February 12th

Members Evening, **New Walk Museum, Leicester.**

Wednesday February 26th

Dr Roger Benson (Department of Earth Sciences, University of Oxford). **The fall and rise of Dinosaurs – a macro-evolutionary perspective.**

Saturday March 1st

Annual Saturday Seminar, University of Leicester. Theme: **Britain's seaside geology.**

Wednesday March 12th

Dr Richard Shaw (British Geological Survey, Keyworth). **The disposal of radioactive waste – a geological perspective.**

Wednesday March 26th

Annual General Meeting and Chairman's Address by Dr Joanne Norris (CH2MHILL, Peterborough). **More tales of the riverbank.**

Talk abstracts 2013

Wednesday October 2nd

Dr Marie Edmonds, Department of Earth Sciences, Downing Street,
Cambridge CB2 3EQ

Explosive volcanic eruptions: controls on lava fountaining at Kilauea Volcano, Hawaii



Kilauea erupting (photo: J. D. Griggs, USGS)

Lava fountaining is the explosive end member style of basaltic volcanism, and is common at subaerial volcanoes on Earth and on the sea floor, and has taken place in the past on other planets and moons in our solar system. Lava fountains, which reach as high as 1 km above the vent, have significant hazards associated with them. Long-lived fountaining eruptions, such as Laki in Iceland (in 1783) can lead to severe climate impact, due to the associated volcanic degassing. Fountains, with their high magma eruption rates, feed large, fast-moving lava flows that can range great distances from the source vents. They are inherently unpredictable in nature, and the trigger for their onset, and the controls on the fountain height, duration and episodicity, remain poorly understood.

Previous models have only considered physical mechanisms of gas segregation from melt, and gas accumulation prior to eruption, as possible causes of this style of activity. My group's recent research, however, has shown that there is a strong geochemical control, and some melts are destined to drive explosive activity right from the point at which they are generated, deep in the mantle. This talk will illustrate how melts are transported, stored and erupted at Kilauea Volcano and the controls on eruption style, based on new results from volcanic gas geochemistry and petrology.

Wednesday October 16th

Professor Adrian Lister (Department of Palaeontology, Natural History Museum).

The natural history of the Mammoth



More is known about the natural history of the mammoth than any other extinct prehistoric creature. The evolutionary origin of the species is well understood, thanks to fossil and DNA studies. This includes the development of dwarfed mammoths on certain islands. Thanks to the preservation of frozen carcasses in Siberian permafrost, the woolly mammoth's adaptations can be studied down to the cellular and molecular

levels. New research using ancient DNA is adding further to our understanding of the mammoth's appearance and adaptations. Even aspects of social behaviour can be deduced, from fossil finds and with reference to that of living elephants, the mammoth's closest cousins. Prehistoric people used mammoth tusks and bones for carving and hut construction, while new finds provide direct evidence of mammoth hunting. Did they cause its extinction, or was climate change to blame?

Wednesday October 30th

Dr Jonathan Lee (British Geological Survey, Keyworth).

Buried valleys of East Anglia – ancient rivers and ice sheet drainage networks

East Anglia possesses an important geological archive that records the behaviour and evolution of the regions rivers over much of the Quaternary. Considerable attention has focussed on the radically different drainage systems that existed both prior-to and following the Middle Pleistocene Anglian Glaciation with the shift of drainage emphasis from the North Sea (i.e. Crag Basin) to the Fen Basin. By comparison, little is known regionally about drainage during the Anglian and specifically the development of subglacial drainage systems. Within this talk, we explore the development of both subglacial and terrestrial river systems in East Anglia during the Quaternary.

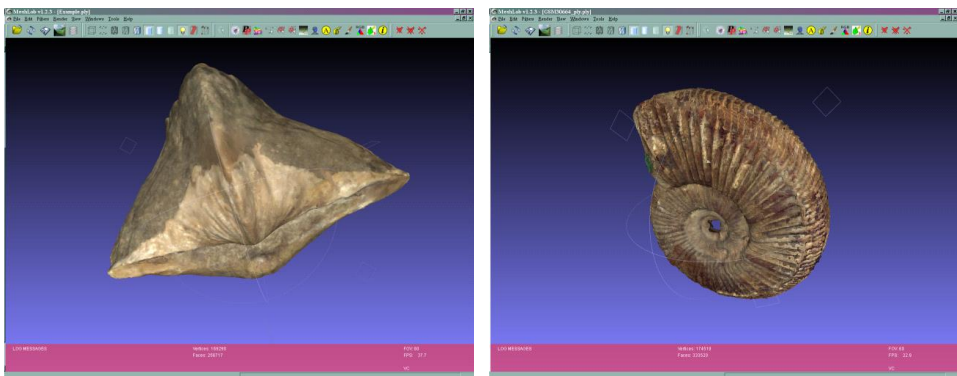
Wednesday November 13th

Dr Mike P.A. Howe, Chief Curator, National Geological Repository, British Geological Survey, Keyworth, Nottingham, NG12 5GG, UK.

Laser scanning & 3D printing 563 million years of evolution: the JISC GB/3D type fossils online project

The ICZN and the International Code of Nomenclature for algae, fungi and plants require that every species or subspecies of organism should have a type specimen to define its characteristic features. These specimens are held in collections and must be available for study. Over time, collections have been moved or amalgamated, and type specimens can deteriorate or become lost.

The British Geological Survey, the National Museum Wales, the Sedgwick Museum Cambridge, the Oxford University Museum of Natural History and a number of local museums have worked together in a JISC funded project to create an online database of the type fossils they hold. Five NextEngine HD laser scanners were used to make the 3D digital models, and Canon EOS 5D digital single lens reflex cameras with a range of macro lenses were used to take the images of the fossils and their associated labels. A simple see-saw stage enabled the production of stereo-pairs. The web portal (www.3d-fossils.ac.uk) provides data about each specimen, searchable on taxonomic, stratigraphic and spatial criteria. High resolution photographs and stereo anaglyphs may be viewed and downloaded (.JP2), and many 3D scans (.PLY and .OBJ) are available. The free downloads of MeshLab™ and SpiersView™ are recommended for viewing and manipulating the 3D models. For more information about the project, see <http://gb3dtypefossils.blogspot.co.uk/>



Examples of digital fossil models viewed in MeshLab™ v.1.2.3, a free, open-source, 3D mesh processing software program.

The Web has transformed expectations in accessing information and is now usually the first port of call. Many museums are providing web-searchable text catalogues, but few have undertaken a large-scale program of providing images and 3D models. This project represents the largest exercise to date in assembling 3D digital models, images and anaglyphs and will provide a major resource for Virtual Palaeontology.

We hope to include demonstrations of the laser scanner and 3d printer during the talk, as well as step-by-step instructions for downloading 3d digital fossil models to your phone, iPad or tablet computer.

Wednesday November 27th

Dr. Timothy Farewell¹ and Dr Martin Whiteley²

1 Senior Research Fellow in Geospatial Informatics, National Soil Resources Institute
Department of Environmental Science and Technology School of Applied Sciences

Bullock Building, Cranfield University, Cranfield, Bedfordshire MK43 0AL

2 Bedfordshire Geology Group

The mapping and understanding of landscapes, geology and soils of Bedfordshire & Cambridgeshire

Using a case study from the low-lands of eastern England, which are generally considered to be geologically rather dull, Tim Farewell and Martin Whiteley will describe some of the simple, yet transformative, GIS techniques they have been using to engage and educate clients, students and the public with regards to the fascinating environmental processes that have shaped this region.

Field Excursion Reports

(all by Rob. Tripp, except where stated)

Lea Quarry, nr Much Wenlock. Staffordshire. Saturday, 4th May 2013



Lea Quarry panorama

photo: Roger Latham

Thirteen lucky Members drove across the West Midlands on the 4th of May to Wenlock Edge, south west of Telford. We met at Lea Quarry (north), to be guided by Member Mike Allen into the area of spoil heaps within this now abandoned quarry. A light shower passed while we gathered, but the rest of the day was fine.

Mike had brought us to Lea to gather fossils from the Lower Silurian Wenlock Limestone, which had been laid down in a shallow, shelf sea. Before lunch we all had gathered good specimens of the abundant brachiopods, some crinoids, and, of course, there were lucky Members taking home prized trilobite parts: - usually the pygidium, but I seem to remember a larger thorax too.

After lunch-packs were eaten, the party entered the underpass into the, now flooded, south quarry. Access was possible along the access road, and around the northern face. This area was well-dressed in superb corals, stromatolite sections, and more brachiopods, crinoids, and those elusive trilobites for the few lucky ones.



Lea Quarry face

photo: Roger Latham

The upper face exposed good examples of reef development, which would have been deposited in an encroaching sea of about 20 - 30 metres depth. The contacts between the reefs and surrounding calcareous mud sediments were seen as being sharp; the knolls and sediments interdigitating. Over each reef knoll, or 'crog-ball', as they are referred to locally, calcareous drapes were seen. Lenses of micrite could be of algal origin, while the knolls were coral-stromatoporoid packstones, or crinoidal

packstones, and grainstones. Slumping around the knolls was evident, with local minor faulting and fracturing accommodating the slumping.



***Heliolites* and trace fossils, Lea Quarry**

photos: Roger Latham

Mike had said that he was not collecting on this day, and so twelve very contented Members departed Lea, and most continued to give thanks to Mike in the convivial atmosphere of a beer garden (but where else?) in Much Wenlock.

Duddington Quarry, Northamptonshire. Tuesday, 28th May 2013

Eight Members travelled east to Duddington Quarry, which is operated by Bullimores, to acquaint members with the Collyweston Slate. Mr Dave Ellis, a Master Slater, and Man of the Stones, met our group there, to describe and demonstrate the material, and its usage; and afterwards entertain us, at his home in Ryhall near Stamford.

Mr Nick Bullimore, with a company Land Rover, regrettably was not available on this day. For our access into the quarry, over some 400 metres, volunteers with 4 x 4s had been called for, but the rain that had fallen, and continued like Scotch mist, created a paste, through which no man with any pride would take his car. And so, eight trusty men took to

Mr Ellis's work horse - his Transit van, in which a foam mat was available!



Face at Duddington, Collyweston Slate in foreground photo: Roger Latham

The quarry is no longer worked for the limestones (which are of relatively low strength, and high water absorption, which restricted usage to fill and sub-base), but for the overlying argillaceous Rutland Formation which gives material for refractory applications. While we were in the southern part of the quarry we witnessed blasting of that Formation to the north east.

The famous Collyweston Slate of Bajocian (Middle Jurassic) age is a yellow, sandy, limestone (or calcareous sandstone) which lies at the floor of this quarry, but was not now apparent in situ, although blocks of it were heaped into a small pile near the centre. Mr Ellis chose three, quite small, slabs not much more than a standard paving slab in total area. He valued them at about £300! It is a fissile limestone used traditionally for local roofing, and once mined, via shafts or foxholes. It is underlain by soft sands, which were dug away, as by a fox, hence *foxing*, thereby undermining the limestone, which fractured and fell. Such *logs* were raised to the surface, kept wet, and over-wintered, so that frost action then

allowed the rock to be cleaved along the cross-bedded foresets, the fissility imparted by the more than usual content of sand, mica and shell fragments. If allowed to dry, the fissility was lost.



Collyweston Slate

photo: Roger Latham

Our Group then inspected the overlying peloidal-oolitic Lower Lincolnshire Limestone, but no fossils were seen. Higher up the southeastern wall we searched for the Ironstone Junction Bed. Certainly there was an iron stained area above the limestone, but we were not convinced that the Bed could be seen beneath what was one of the tills cloaking the area. The only macro-fossil was found at this point - a belemnite sp. from the till. We did not have the expert eye for the tills, but surmise that the belemnite would have been in the higher, chalky till, probably of MIS10, the Wolstonian Stage.

We repaired to the Slaters Arms in Collyweston for a most pleasant lunch (!), and then to Mr Ellis' home in Ryhall. Mr Ellis has followed a career in stones, which most obviously is, and has been, his hobby as well. We were graciously entertained by inspecting his cutting shop, various rock types and fossils, specimens of which he gladly donated to

Members who were most pleased. We thanked Mr Ellis, and made our departures just before teatime, after quite a long and informative day.



The Duddington party

photo: Roger Latham

**Weekend excursion to the Vale of Wardour, Wiltshire.
Friday May 31st – Sunday June 2nd 2013**

This was a new area for us, expectations were high and fingers crossed for good weather. A glance at the geological map promised exciting things in an area of the column about which we knew relatively little. As is usual these days we began the weekend with a visit on the Friday, when we revisited Oathill Quarry near Temple Guiting in Gloucestershire. We last went there on the weekend trip in 2006, and it was a pleasure for me to take the Section back to a fine locality. Ten of us convened at 11.00am and were given a friendly welcome by Paul Keyte and his team. It must be recorded that the management here could not have been more helpful. The quarry exposes the famous ‘Guiting Stone’, which comes in two varieties, Cotswold White and Cotswold Gold. The levels are within the Inferior Oolite Group of the Middle Jurassic. At the top of the quarry a unit known as the Oolite Marl is exposed and that proved to be a happy hunting

ground for shelly fossils. Elsewhere, lower down, there were some splendid sedimentological structures including large scale cross bedding, but we didn't have a lot of luck locating the reefal structures sometimes seen at the junction of the 'White' and the 'Gold'.



The Oathill group

photo: Andrew Swift

After two very pleasant hours we said a reluctant goodbye to Oathill and set off south for the Vale of Wardour, where we would spend the rest of the weekend.



Oathill working face

photo: Andrew Swift

Our base in Wiltshire was an old coaching inn, the Angel, in the lovely village of Hindon, and many of us arrived with ample time to explore in

what had developed into a fine day. It took little initiative to locate the other pub in the village, the Lamb, and party members enjoyed a gentle perambulation between the two hostelries meeting other group members. However, the whole party met first later in the Angel when we were introduced to our leader for the weekend, John Needham. John is a local stonemason, who had a real feel for stone and a broad knowledge of the local geology. After the formalities we enjoyed a relaxing evening of socialising.

When all the stray lambs staying elsewhere had been gathered the following morning, we set off for our first locality, Lower Lawn House near Fonthill Abbey, which was only a short journey from Hindon. Here there was a much overgrown and partially built over gloomy Portland Stone quarry, but at least we were introduced to one of Britain's finest building stones. The setting for the old quarry was a sort of arts and crafts centre. Nearby lived a relatively famous bookbinder who was also a keen church lover and he introduced himself. An C18th dovecote excited some interest. Off then to Tisbury, to John's home in another fine old Wiltshire village/small town. Here we viewed John's terrific fossil collection, nearly all of it from the local quarries, particularly Chicksgrove, which we were to visit shortly. Before we left Tisbury, there was time for a quick visit to Tisbury church for those interested.



Specimens from John Needham's collection

photo Andrew Swift

The working Chicksgrove Quarry is just a short drive from Tisbury, and that was our main locality of the day. In fact it was the only significant exposure we saw during the weekend, and a very fine, instructive locality it was. Again, the payload of the quarry was provided by the latest Jurassic Portland beds, but also exposed is the transition to the succeeding Purbeck beds, which showed much of interest including large stromatolites and increasing non-marine conditions. Some nice fossils turned up too.



In Chicksgrove Quarry, the Portland beds

photo Andrew Swift

On Saturday evening we held the annual weekend excursion dinner in the Angel. While the meal itself left something to be desired, the atmosphere and bonhomie couldn't be faulted. We toasted the Section as always and the Chairman thanked John Needham for his informed and efficient leadership. Helen Jones was also thanked for organising the weekend.

As is usual for the Sunday, we had a fairly leisurely morning of geology before calling a halt at lunchtime. Many of us will recall the beautiful morning before we left the Angel when we sat in gorgeous sunshine in the outdoor area. Once ready, John took us first to a high point of The Downs where we had a wonderful view of the countryside and geomorphology.

From there we descended to Chilmark Ravine where John hoped to show us the infrastructure and setting of a Portland Stone mine. However, the area was now a high security army facility with high fences and a very much ‘keep out’ atmosphere. Worse, John hadn’t got permission for a visit, so when he squeezed into the base clandestinely, many of us feared the worst. And we got it, in just a few minutes a very cross looking army security guard arrived and for a moment I thought we might all be arrested, John at the very least. Yet somehow John managed to persuade the guard to let us in to see the entrance to the old mine, but by then most of us would have preferred a dignified exit before the guard changed his mind! Our last call of the day was a confusing network of tiny lanes around somewhere called Ridge, where after great difficulty parking, we saw old workings in the Greensand.



Most of the Vale of Wardour party in The Angel yard photo: Andrew Swift

Proceedings didn’t quite end at that point, as some of us sought out a hostelry for drink and sustenance, and found the Black Dog at Chilmark, a pub that despite being very busy, catered for our needs nicely.

Andrew Swift

Burton Dassett & Cross Hands SSSI Quarry, Warwickshire. Saturday 13th July 2013

This excursion was a joint meeting with our near neighbours, the Warwickshire Geological Conservation Group, organised by Ian Fenwick, and led by Jon Crossling, both of the WGCG. The Meteorological Office had warned that the day would be the hottest for seven years, and it was! That had repercussions, and Jon achieved a notoriety that no other leader has ever merited!



The party for the Warwickshire trip

photo: Roger Latham

Six members met with about ten of the WGCG at Burton Dassett Hills Country Park, at which a small parking charge is levied. The Hills are an inlier, a complex of disused quarries and intervening disturbed ground, with much-faulted strata of Lower and Middle Jurassic age including the Dyrham, Marlstone Rock, Whitby Mudstone and Northampton Sand formations. There is a sharp contrast here as opposed to the unfaulted Edge Hill ironstone escarpment to the west and south.

Jon briefed that he was planning for the group to deduce the scenario of the area, and then first led the group to the Windmill Hill, where the nature

of the building stones was examined. The structure itself may have been a beacon or a windmill base. Evidence of filled doorways could be seen, but the main interest was in the stones: obviously sandstones, ferruginous in part, many with trace fossils, and some with fossilized wood. From this vantage point Jon pointed out the nearby areas which were, or were not, disturbed.



The magic of field geology

photo: Roger Latham

We then walked southeastwards into what was presumed to have been an old quarry, where a hard ground lay above an eroded surface. This we suspected to be the contact between the Dyrham and the overlying Marlstone Rock Formations. Continuing southeastwards over disturbed ground, we entered into another old quarry, behind us we could see a ferruginous outcrop, while to our front, the ironstone clearly had been removed, and the high bank above was mudstone. We were moving up-sequence, and up-grade, but then further southeastwards, we entered a further quarry from which the marlstone had been excavated. We had crossed a fault line. In the south wall of this quarry there were

slickensides in the Marlstone. Above the Marlstone, a long incline of grassland led up to Harts Hill. From this summit we could see the grassland was on the Whitby Mudstone, which had been farmed, traditionally by ridge-and-furrow. The soft slopes of the hill are protected by the erosion resistant Northampton Sand, a small exposure of which can be seen about 10 metres from the top. We descended Harts Hill, crossed the small road and ascended Magpie Hill. The rock of Magpie, while at a comparable height to the flank of Harts Hill, was not of Whitby Mudstone and the valley was cut along a conspicuous sinuous fault line bending east-southeast to west, followed by the road, weaving between Magpie Hill and the Harts and Windmill Hills.

No fossils were found at this site, but overgrown clays to the west flank of the Park are said to contain ammonites and belemnites.

We left the Park and drove down the Fosse Way to Morton in the Marsh, and the Cross Hands SSSI, to take lunch at what was once known as the Cross Hands public house, at the junction of the A436 and A44. If you remember, it was the hottest day for 7 years. We had been tramping over the Burton Dassett Hills for 2 hours. Our water bottles were empty. It was now lunch time. The WGCG contingent had done enough. They had all gone home! Six stalwarts of the Leicester Literary and Philosophical Society now stood in the bar of the Cross Hands. And the barman said - "Sorry Gents we're closed" (apologies to Angela). Jon Crossling had achieved the impossible.... We were in a pub with no beer! Or food! Or 'facilities'! The reason was that the water main was interrupted near to Little Compton, consequently without water, we could not be served fluid, or food, or use the 'facilities'. One stalwart managed to purchase a packet of crisps!

Our only option was to visit the Cross Hands quarry area, and SSSI, in the hope that the water supply would be 'back on' afterwards. Jon consoled us with the knowledge that the schools were still holding back the little horrors, and therefore the spoils were ours for the taking. Indeed there were many, many, fossils to be found in and around the spoil. The site owners periodically turn over the spoil to allow fossils to 'weather out'. Many shells were found originating in the Bajocian Clypeus Grit limestones which underlie the Hook Norton Beds. As dehydration took its toll, we entered the SSSI quarry, where the limestone can be studied, its fractured nature resulting from lateral pressures, being most apparent. The

Grit, here in its most northerly exposure, is key to palaeogeographical and palaeoecological reconstructions.



Cross Hands Quarry

photo: Roger Latham

The water supply had been reinstated. We thanked Jon for his knowledge and expertise, but why we bought him two pints is inexplicable....except the heat had clouded our minds. It was the only cloud that day!

A visit to **Measham Brickworks** was denied by Hanson after staff relocation.

Derbyshire, 10th August. Only one of our members attended this joint meeting with the EMGS, but he was also a member of the EMGS, so I guess we had half a participant. In those circumstances a report was deemed unnecessary.

Changes in coffee/tea provision at meetings

As announced in the last Charnia, to which you are referred for a full explanation, from the first indoor meeting on October 2nd, the refreshments we offer before meetings will be ‘donations only’ i.e. there will be no set charge for coffee or tea. What we are asking you to do is put a donation of whatever size you deem appropriate into a tin. In that way, under a new government scheme we can claim tax back on the monies generated, which will be now genuine donations to our funds, rather than a charged item as before.

Subscriptions

You are reminded that subscriptions for 2013 – 14 are due from October 1st. Please make the Secretary’s job easier by paying promptly.



Cloud Hill Quarry 7.9.13 (report in next Charnia) photo: Andrew Swift

Cover photograph, stromatolitic Purbeck Beds, Chicksgrove Quarry, Wiltshire

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