

EAST HERTS GEOLOGY CLUB

Newsletter No.13

September 2009

Festival of Geology

The date for the G.A. Festival of Geology this year is Saturday 31st October at University College London, Gower Street, London WC1. We would like to present posters of our field trips to Exeter, Filey and Germany with possibly a bit of Puddingstone thrown in. Help preparing posters beforehand and help to (wo)man the display on the Saturday would be much appreciated (in fact, necessary). It is an enjoyable and worthwhile event. A series of lectures will take place through out the day: Dr Steve Edwards on *Papua New Guinea*; Dr Danielle Schreve on *The Life and Death of the Woolly Rhino*; Dr Ruth Siddall on *the minerals and other materials used to decorate Romano-Egyptian Mummy cases*; Prof. Ian Stewart on *How Earth Made Us*. It sounds a good programme. There are also three field trips and a building stone walk on the Sunday 1st November. Details in the G A Magazine. Please ask Diana, Steve or Jane if you want to see this.

Annual Charity Lecture – Thursday 29th October at 7.30pm at Christ Church Centre

Dr Mark Hows will be giving a lecture entitled "*Past, Present and Future Hillfigures*". All proceeds will go to Macmillian Cancer Support. Please book your tickets as soon as possible. Most people should have received a poster and a reminder. Tickets are £5 (£3 for members) and are available from Youssouf Seedat, 81 Bengeo Street, Hertford SG14 3EZ. Send all email enquiries to yousouf@ntlworld.com

"Not the Christmas Party" – Wednesday 9th December at Ware Museum from 7.30pm

We will be having a DIY "do" this year. So please bring some food and /or drink along and we will have various displays and quizzes for you, and we might even get Steve to talk about a few rocks. We will provide plates, glasses and bottle openers. There will be a charge of £1 to pay for hire of the Museum. ***It would be handy to know if you are intending to come.*** Please let Diana know by email or phone.

Saturday Schools at Hertford Regional College

Half Day Saturday School: Geology: All About Fossils 21st November 2009 10am to 1pm at Hertford Regional College, Ware. This 3 hour session which will be based to a large extent on abundant specimens. We shall look at most major fossil groups, as well as considering, necessarily briefly, habitats, development of life through time, fossil preservation and care of specimens. I plan an associated Cambridge Museum visit.

This session ought to be of particular value to club members who have not done a lot of formal geology and want to improve their knowledge. The class is likely to be limited to 16 people. Enrol by phoning 01992 411411 during office hours or on line at www.hrc.ac.uk
Course Code KWR121X Fee £20

Also - Geology: The Norfolk Coast – 13th March 2010 – Code KWR550X - £20

Chalk fossils, moving ice sheets, mammoths and early man.

Geology: The Scottish Highlands – 24th April 2010 – Code KWR606X - £20

Volcanoes, exposed roots of mountain chains and recent glaciers.

Associated field trips are planned for both these courses.

Steve Perkins

Club visit to Exeter.

The six S.W. England granite plutons have different ages within the Permian, ranging from 292Ma for the Falmouth pluton to 275Ma for the Dartmoor one (Chen et al, 1993). The Permian desert sediments of the area, which include flash flood conglomerate formations at three levels, were studied in an area around Crediton by Edwards et al., 2001 who made use of these ages. The oldest of the three has flow directions from the north. The middle one contains volcanic pebbles with the same, 278Ma age as the Bodmin Moor pluton, and flow is from the west. The

top one contains volcanic pebbles with the 275Ma age of the Dartmoor Granite, and flow is from the S.W. Evidently volcanoes developed above each pluton when it was intruded and became the highest ground and consequently the source of the sediments.

Permian volcanic rocks, the Exeter Volcanics are interspersed with the sediments. They include lavas likely to have been associated with the granites, but there are also ones which have come directly from the mantle. These include basalts and also some rocks called minettes that are rich in black mica.

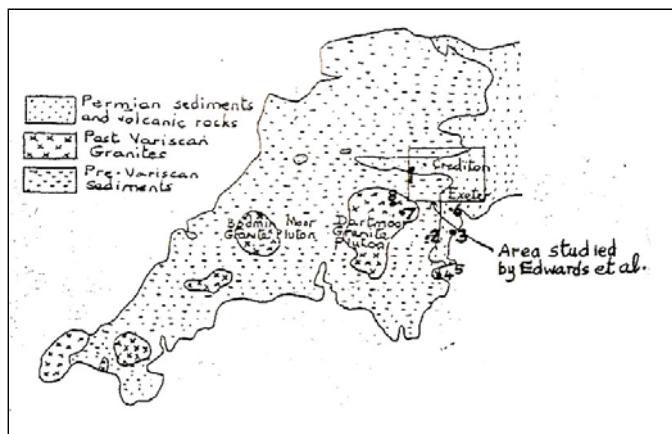
The group stayed in Exeter. We were helped with finding field localities by Joy Preece, formerly a Ware College Geology Class member and still a club member who now lives in Axminster.

The localities visited were:

1. Posbury. Agglomerate indicating proximity to a volcanic feeder pipe in an overgrown disused quarry. Also rocks from there in the walls of a chapel. Arrangements for this visit were made with the nuns of a nearby convent by Rosemary Stewart, a friend of Joy's who joined us there.
2. Chipley Farm. A good exposure of pillow lavas, pre-Variscan, not Permian. Also stinging nettles.
3. Shaldon near Teignmouth. Conglomerates with pebbles and boulders of porphyritic micro granite. Clearly related to the Dartmoor Granite but either volcanic or from associated dykes.
4. Paignton. Permian red sandstones and conglomerates unconformably overlying Torquay Limestone. Sandstone dykes. We failed to find a dyke of volcanic breccia, perhaps because the tide was coming in.
5. Triangle Point, Torquay. Lovely Torquay Limestone with abundant tabulate corals and stromatoporoids.
6. Kenton. Roadside cross section through dunes.
7. Blackingstone Tor and 8. Nattadon Common S of Chagford. Dartmoor Granite with parallel large feldspar phenocrysts showing flow direction. Also tourmalinisation and mafic enclaves.

We did not manage to include a building-stone walk in central Exeter in our activities. Had we done so we should have seen abundant porphyritic S.W.England paving slabs, with lovely twinned feldspar phenocrysts, some of them forming butterfly shapes. There is also abundant Exeter Volcanics in the stone walls, including the original city wall which is partly Roman. These are things for anybody who visits Exeter to look out for.

Steve Perkins



Club visit to Filey- Trace and body fossils in Yorkshire Weekend

In June 8 members of the club visited the East Yorkshire coast under the guidance of local geologist Jack Doyle who is a specialist in the geology of that area.

Shortly before the trip Jack gave an extremely interesting talk that was open to everyone about his many years of studying the Speeton Clay deposits, what he had discovered and what we might hope to see there. He explained that the Lower Cretaceous material in Yorks is equivalent to the Wealden in Sussex and that they are estuarine deposits occurring in layers shown by the material laid down in warmer conditions being paler than that formed in colder temperatures.

The weekend got off to a very good start on the Friday evening when those of us who had already arrived in Filey met up with Jack to discuss the itinerary over a few drinks. We were all given some excellent notes covering the geology of the region and a copy is obtainable from either Jane or Yous.

Saturday began at the Haven holiday camp at Reighton. The rocks in the cliffs here showed considerable folding as a result of the alpine orogeny and yellow ash deposits could be clearly seen. Within the Speeton clay, with the aid of Jack's experience and a useful pickaxe, we found specimens of large cold-water belemnites and smaller warm water species. A wide range of ammonites can be found in these cliffs and many of them are used as zone fossils. Amongst our finds were segments of a loosely coiled ammonite (*Aegocrioceras semicinctum*) and Mike came across another species not usually found so far north which was of particular interest. It is considered probable that this area had originally been within an ammonite migration zone. The Speeton Shell Bed was easily distinguishable and we also identified an ice raft feature.



Jack knew exactly where to dig

After lunch we had a quick non-geological look at Flamborough Head before going to Danes Dyke. Many Marsupites plates were found here and a few bodies which were very distorted.

On Sunday we went a little further North towards Scarborough to Cayton Bay to look at the Gristhorpe plant beds at Yon's Nab. The deposits here are of Middle and Upper Jurassic origin but we were mainly interested in the shales. Fern leaves were soon found and, within the shale, abundant Calamites stems could be clearly seen but unfortunately most of the finds were too fragile to bring back. We returned to the car park along the Cleveland Way and came across a stack with a peregrine falcon and her 2 chicks perched on top which held our attention for quite some time.

As a finale we went to Scalby Ness to hopefully see some dinosaur footprints. As so often happens there was some disagreement amongst ourselves as to whether we were seeing footprints or erosion features. Some subsequent research on the Internet however has revealed some photographs taken in 2004 showing some prints looking very similar to those we found so we need to go back and have another look.

There was much more geology further north that we would have liked to have seen given more time and hopefully we will have the chance to further explore the Yorkshire coast in the future. We would like to thank Jack for giving us so much of his time and as a result we all learnt a lot and had a great weekend.

We will show our photos and finds at a meeting later in the year.

Mary Deeks

Club visit to Wülfrath and the East Eifel 5th and 6th September

Of the original proposed group we were whittled down to a very select five. This was convenient as it meant we all fitted into one car in Germany (Diana and Steve travelled over by train a day early). The Town Twinning representative was on hand to help us and tell us about Wülfrath. Via the G.A. we were put in touch with the local quarry people Rheinkalk and on the Saturday we visited their massive Rohdenhaus Quarry. One of the Company geologists gave us a rundown of the area and the site before taking us into the quarry in a Land-rover (this was much appreciated as it about 3km across the quarry apart from the depth). We enjoyed over three hours in the quarry looking at the limestone, the corals and other fossils, something referred to as *amphora* (stromatoporids) and then galena and some very large quartz crystals (ask to see them). After a rather late lunch we visited the Museum at Neanderthal, which was not very geological but was interesting.

On the Sunday we had decided to visit the East Eifel a volcanic region (similar to the Auvergne but smaller). We had checked out the places to see, via an apparently well laid out website, (<http://vulkanpark.com>) and started off at the Information Centre (it should perhaps have been named the misinformation centre) where the only useful things were the loos. We

persevered and more by luck than judgement found a site called the Nastberg. This was an excellent cut through a volcano which could be seen from several positions and depths. Lunch was taken in Nickernich. We persevered some more and finally ignored a no entry sign and found the Eppelsberg. There was a big quarry in this volcano so it was possible to see many layers and flows. We found the crater-lake, the Laacher See which was very impressive and possibly one other site. Although this sounds as if it was a bit of a disaster what we did see was good. Thanks to Mike Goodyear for all the driving.

We would like to consider another trip to this area to see much more of the volcanics and have put out some feelers to see if anyone else knows the area. If we based ourselves in the Nickernich area we would be able to see much more. Non-fossiliferous but some interesting archaeological bits to see as well.

Diana Perkins

Chalk – a Way of Life – exhibition at Ware Museum

(mid July – 10th September) **in conjunction with the GeoEast Chalk Project**

With the assistance of various people (Steve, Jane and Jenny) and a fair amount of input from the internet I produced an exhibition which included fossils, flora and fauna, Hill Figures, and Scott's Grotto and seemed to be of interest to visitors to the Museum. I have some photos which I will bring to the next meeting for those of you who were not able to get in to see it. GeoEast wanted to encourage the general public to take more interest in the Chalk of this area. They have produced a full colour leaflet which will be available at meetings for members to take and spread around. Check out the GeoEast website there is a lot of information on it and EHGC get a mention too. www.geo-east.org.uk

Diana Perkins

Future events planned for 2010

AGM – Tuesday 19th January at Ware Museum

Sedgwick Museum, Cambridge - visit in February or March

Di Clements – Thursday 13th May

Scott's Grotto – Wednesday 16th June (tbc) followed by refreshments at Perkins' Towers

Hertford Fun Day – early June (hope not to be rained off this time)

**Puddingstone goes radioactive.**

Well not strictly true, but I thought it would get your attention, and our puddingstone has set off a series of chain reactions, albeit not nuclear ones.

At the G.A. Festival of Geology last November we had a puddingstone display, (newsletters 8 and 9). As a result I was asked by the London branch of the Open University Geological Society (OUGS) to arrange a puddingstone field trip for them.

On 10th May 30 members of OUGS arrived at Ware Museum where I gave them a talk about Hertfordshire Puddingstone. We then visited Sutes Farm where Bessie Parkins showed us her splendid collection of puddingstones gathered over her years at the farm, and more recently from the excavations for the A10.

After a picnic lunch in the Priory grounds (the weather being remarkably ungeological) Steve led a Geological Walk of Ware. This was based on the walk many of us have enjoyed over the years, but differed in that Steve had written a guide, which they followed in small groups. We attracted the usual interest from passers by, and the kerbstones were even cleaner than usual after one of Steve's walks as each group had been issued with a bucket of water and a J cloth.

Among the group was Di Clements whose thank you letter included 'Steve did us an excellent Building Stone trail around the town. It was great fun and I think we could all learn

something at whatever level. You should add some pictures and turn it into a booklet to sell. Di leads London building stone walks for the Natural History Museum so praise from her is praise indeed. We are hoping we can take her advice and that EHGC members will be the first to try the booklet out. (Hint! hint! Steve).

EHGC had previewed my puddingstone talk, and the Club visit to Shutes Farm took place on 14th June, including a live performance of The Puddingstone Song, by Mike Excell, see www.youtube.com/watch?v=zymatD3aUZc. Mike had been inspired to write the song after Bryan's Charity lecture on Climate change (newsletter 8). Afterwards we were invited to Bryan and Carol's house for a Puddingstone Party, including Puddingstone Bitter from Tring Brewery. Our thanks to Bryan and Carol for a most enjoyable party, and our congratulations to Bryan on his election as President of The Geological Society of London.

Amongst the party guests was Nick Rogers, a colleague of Bryan's from The Geological Society, and Head of The Earth Science Department of the Open University. He was very interested in our research, and offered to lead a ramble to some puddingstones around Green End (where he knows the local landowners).

On 13th September a group of us met at Green End Farm, and during our ramble led by Nick found Palaeogene sediments on top of the chalk. The sediments are characterised by soil containing rounded black flint pebbles of the Reading Formation where we believe puddingstone was formed when the pebbles were cemented by silica when they were embedded in fine sand which is the matrix.



Also in places we found reddish brown soil containing assorted pebbles, including rounded and angular flints, as well as quartzite. The large puddingstones Nick showed us were these Quaternary age river gravels which have been bound together by hydroxides of iron (essentially rust) deposited by circulating water. Like the typical Hertfordshire Puddingstone it is used for building, and we saw blocks of it in Little Munden Church. This trip was extremely useful, as we knew we have large lumps of Hertfordshire Puddingstone in the area, but I was not aware we have such impressive lumps of ferricrete. We finished by lunching in a local pub garden, the weather again being kind to us.

The chain reaction is ongoing.

Di Clements is a specialist on London Geology, and will give us a talk next year.

Nick Rogers has offered a talk on The African Rift System..

I am taking bookings to give talks about puddingstone to local groups, which is all good publicity for our club.

Some of our local puddingstone is being made into jewellery, so if you are thinking of your Christmas present list, have a look at. www.eborjetnetworks.co.uk *Jane Tubb*

Down to Earth Magazine

I have copies of the August and September editions and would be glad to find homes for them. I will leave them inside our porch, 6 Scotts Road opposite Ware College (HRC) and members are welcome to come and help themselves. I will try to remember to bring any remaining copies to the next meeting by which time the next edition will have arrived!

Diana Perkins

This issue of the Newsletter is being posted out to you because of the photo and diagram it contains. One day Diana might be able to get to grips with scanner, camera and computer but not when she's in a hurry!

Contact Numbers: Jane Tubb 01920 822405
Diana and Steve Perkins 01920 463755

See also the website www.ehgc.org.uk

P.S. It is time to renew your membership of our club. Membership costs have remained static this year. £10.00 for students, £13.00 for single members and £19.00 for joint members (or families). Address on your reminder.

Geoff Brown