

Bedfordshire & Luton Geology Group

NEWSLETTER

Spring 2009

Ouse bone is that ?

by Martin Whiteley

In May, I was contacted by Bedford Museum and asked to identify a fossil bone that had been found near Bedford by Penny Wood. The bone was found in a shallow gravel pit, but because the site is being worked and backfilled rapidly it was not possible to relocate the find precisely. The bone occurred at the base of a 2-3m sequence of fluvio-glacial sands and gravels, overlying the Oxford Clay substrate. Andy Curran, a specialist from the Natural History Museum in London, suggests that the bone is a fragment of the shaft and part of the distal end of a tibia from either a largish horse or, more likely, a small rhino. It probably belongs to the woolly rhinoceros *Coelodonta antiquitatis*, which was fairly abundant in England about 35,000 years ago.



This is an interesting find and it provides another important clue to reconstructing the environment in the Ouse valley during the latest (Devensian) glacial phase. During that phase, which lasted from about 200,000 to 10,000 years ago, the climate varied between cold, periglacial conditions and warm, temperate periods when temperatures were similar to those of today. Mammoths and woolly rhinoceroses roamed around the area, along with Palaeolithic hunter-gatherers, all blissfully unaware of what interest their remains would generate millennia later!

Tibia bone of a woolly rhinoceros found by Penny Wood in the late Devensian gravels of the Ouse valley, near Bedford.

RIGS Update
See page 2

B&LGG and
Regional News
Pages 2 & 3

Dates for your
Diary
on Page 6



B&LGG Geodiversity
Photograph
Competition 2009
winning photograph by
Anne Williams. Read
more on Page 6!

Edited by Bev Fowlston.

If you have any comment or wish to include an article in the next issue of this newsletter then please contact me on 01525 375353 or by email bev.fowlston@gmail.com Deadline for next issue is 28th August 2009.

I hope you enjoy reading on.....

RIGS Update

Geodiversity sites in Bedfordshire

Most of our members will be aware that we have a network of 21 Regionally Important Geodiversity Sites (RIGS) in Bedfordshire. These, in tandem with the five geological Special Sites of Scientific Interest (SSSI), provide a reasonable snapshot of the geodiversity in our county. Over the last few months I have visited each of these sites in order to assess their present condition and determine whether they still reveal the key geological and/or geomorphological features that formed the basis for their original designation.



Drag lines operating at Quest Pit before closure, revealing new Oxford Clay exposures.

It is gratifying to report that most sites are still in good condition, but there have been some casualties. Quest Pit at Stewartby, where the Oxford Clay was extracted for brick-making for 25 years, closed in 2008. It was an important site for palaeontology and stratigraphy, but relied upon the drag line operation to provide fresh exposures for study. The remaining clay faces are now degraded and difficult to access. Several sand pits in the Leighton-Linslade area have been backfilled, although new pit extensions have offset this loss to some degree.

Ironically, the SSSIs are generally in poorer condition than the RIGS, despite their status as sites of national importance. The rationale for designating some of the Woburn Sand (Greensand) sites around Leighton Buzzard has long since been lost through extraction and an important rock unit known as the Shenley Limestone is no longer evident in situ anywhere in the county. The gravel pits at Biddenham are badly overgrown, but we held an on-site meeting with Natural England recently and there is some

prospect of clearing them later this year.

The transient nature of rock exposures in working quarries is a fact of life and only in very special cases is it possible to conserve them indefinitely. For this reason B&LGG has continued to identify and preserve representative geodiversity sites on a more permanent basis. One such locality is at Potton where a disused quarry face has been cleared to reveal an informative section of Lower Cretaceous Woburn Sands. Clearance work was again undertaken in March to maintain its pristine condition, followed by a public open day that generated a good deal of local interest. Another site has been cleared in the vicinity of the working chalk quarry at Kensworth, again providing safe and easy access. Both sites have an interpretation panel for the benefit of casual visitors.

Martin Whiteley
B&LGG RIGS Manager



B&LGG members looking at the Kensworth interpretation panel.

B&LGG News

Strategic Stone Study in Bedfordshire

Those of you with a good memory may recall that B&LGG was to be involved in a study of building stones in Bedfordshire some 18 months ago. This project was set up by English Heritage and it went through several pilot phases before a final scope and workable format was determined. We are now ready to get started and, ironically, have about three months in which to complete the work! This note describes the project and invites you to contribute if you are interested.

Now called the *Strategic Stone Study*, the project aims to provide detailed information on natural stone used in English buildings. It will create a freely available, national database which will include information on all types of important building stones, together with the location of the quarries from which they were derived. The database will also include examples and numbers of the buildings that were produced from them.

The objective is to provide this information to all concerned in safeguarding the built heritage, as well as those who need appropriate stones to repair existing buildings and for new projects in sensitive areas. A secondary objective of the study is to raise awareness of England's diverse stone built heritage and its unique regional and local distinctiveness.

I have been asked by English Heritage to complete this work on behalf of Bedfordshire and to:

1. Provide a short report summarising the stone resources and their distribution in relation to local geology.
2. Review the stone built character of Bedfordshire and highlight current stone issues such as source and supply problems.
3. Compile data about building stones types.
4. Compile building stones and architectural data about villages and identify representative stone buildings.
5. Check data supplied by the British Geological Survey relating to current and historical locations of quarries used for building stones.

Items 1-2 will be based on *The Building Stones of Bedfordshire*, the excellent booklet written by Jill Eyers some years ago. Items 3-5 require completion by populating large spreadsheets which will ultimately be aggregated, county by county, to produce the national database.

How might you help? If you are interested in any aspect of this project, and that might include geology, history, architecture, archive and literature studies, photography, fieldwork etc., then please get in touch with me. There is certainly a need to complete some basic information about important individual stone buildings (e.g. Woburn Abbey, town halls, parish churches) and distinctive villages (e.g. Pavenham with its limestone buildings). Do get in touch if you have anything to offer - it might be that you know of an important stone building in your village, or that you have parish records stating that your local church is built of Totternhoe Stone - it's almost certain that anything along these lines will be important to capture in the national database. Contact Martin Whiteley, Strategic Stone Study Co-ordinator for Bedfordshire, Tel: 07732 913 812, Email: mjwhiteley@yahoo.co.uk

Regional News

Introduction to Geo East by Peter Lally

Geo-East was created a couple of years ago to widen interest and unite interested parties in Geology throughout the East of England. A concept created by the Suffolk Geology Group.

The founder Chairperson stepped down last month, and I have filled this role in conjunction with being Chair of B&LGG. The plan is that each of the 6 Counties takes the Chair for a term of one year. Counties representing Geo-East are, Bedfordshire, Cambridgeshire, Essex, Hertfordshire, Norfolk and Suffolk.

Foundations are now set under the Geo-East umbrella to develop geology within both the East of England and Bedfordshire, and this is a very good time for Bedfordshire to be involved. Geo-East have developed a website, which is anticipated to be available for trial purposes next month, and this will allow B&LGG to populate our details, events, photographs, and whatever information we wish to a wider audience.

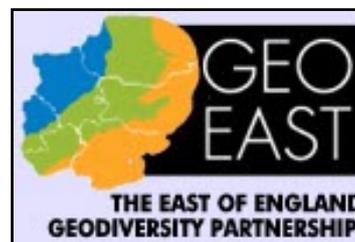
The philosophy of Geo-East is to use this as the main structure, and within this structure to breakdown geology into specifics. For example Chalk has been chosen first, this being common to all the 6 Eastern Counties, and pushed as an area to concentrate on. Currently a leaflet is being produced depicting Chalk sites and areas of interest within the Geo-East Counties. We have 3 sites shown, Dunstable Downs, Houghton Regis Quarry, and Sundon Hills. We will be receiving 1,000 copies of this leaflet during the next few weeks, and will make them available for you to see.

Various B&LGG people have been involved with Geo-East, Bev Fowlston, Jan Munro, Lindsay Hiles, and Martin Whiteley, creating the leaflet, providing photographs, attending meetings, visiting potential sites, and generally keeping our Group in the frontline. Martin and I have visited various sites, looking at chalk streams, brickearth pits in the south of Bedfordshire, particularly around the Luton area. Looking at existing RIGS Sites, to determine what and how they can be developed, and discussing thoughts with various influential bodies on how to move forward. The conclusion of our investigations, and discussions is that we would like to develop a number of sites, and restore existing RIGS, being within Geo-East this could be possible, because funding is available, but the way funding works, one has to provide Match Funding, and therefore more work is needed.

Should you require more details about, or wish to get involved with Geo-East, please let me know.

Look out for the new website at

www.goeast.org.uk



Event reports

Geology Walk around Sandy

By Martin Sims

On Sunday 8th March, a perfectly sunny morning, we met in the car park opposite Sandy's main church. Martin Whiteley then introduced himself and ran through his plan for the walk.

This completed we set off along the main road, at a suitably leisurely pace, but rapidly turned into an estate, through an alley then across a bridge over the railway into the Pinnacle recreation area. We headed to the top of the Pinnacle itself where Martin got out his white board in order to draw instructive diagrams to aid his talk.

He explained the major geological forms and underlying geology of everything we could see, which from that vantage is a lot: all the way from the Greensand Ridge upon which we stood to the chalk scarp in the south to Bedford roughly north west of us.

The valley in front appears to be wide and flat such as typical heavily glaciated clay vales but Martin revealed, with a sketch stratigraphic succession, that the ridge opposing us, upon which Moggerhanger sits, was actually formed entirely from glacial till laid on top of the underlying clays. Martin then pointed out the Ivel River and how small it was in comparison to the valley it now flows through, and hence could not have formed it. Another diagram showed how a deep and wide glacial channel cut along the bottom of the ridge during one glaciation and going way below the current ground level had been filled in with sands and gravels as or after the glaciation retreated, only for a later glaciation to sweep a shallower but much wider valley out, cutting the top of the sands and gravels away as well as taking the clays much lower than they'd previously gone on the far side of the valley. We then all turned round to look at the valley with our newfound understanding before heading off south along the bottom of the Greensand Ridge, following the railway.



Martin stopped us briefly to show us some fish ponds which were old gravel pits, where the sands and gravels filling the deep channel that the first of the glaciations mentioned above had cut were extracted from. He mentioned that Broom Quarry, another local RIGS, was also there to extract these gravels.

We headed further south and through a wooded area to find ourselves half surrounded by cliffs. Martin explained that we were now in an old Greensand stone quarry, the site of our RIGS at The Lodge, Sandy. Using further diagrams he demonstrated how bedding planes and cross-bedding formed then pointed out in the cliff faces good examples of both. Using these, he told us, it has been worked out in which direction and how fast the water laying these sediments flowed.



Explaining the apparent mismatch between the fairly bright orange colour of the cliffs in front of us and the name Greensand applied to them, he said that the stone is used in many of the older local buildings and weathers to a dark greenish shade.

After spending some time getting up close and personal with the cliffs to observe the fine structural detail with Martin helpfully answering many interesting queries we head further into the woods to come back north along the undulating top of the Greensand Ridge.

Still within the grounds of The Lodge, we found a large hill fort that the RSPB appeared to have freshly cleared of trees and scrub. After a chat about this we headed back, with Martin still answering questions on a gradually expanding subject field.

Thanks go to Martin for organising the event and so clearly explaining two of our RIGS and the context in which they are important, as well as patiently fielding the attendees questions.

Time travel, a drive across the Geology of Bedfordshire

By Lindsay Hiles

On Sunday 19th April, Bev Fowlston took a group of us on a guided drive through Bedfordshire noting the different geology along the way, from the oldest rocks in the north to the youngest in the south of the County. We started at the Harrold-Odell Country Park, which is sited on sediments deposited after the last Ice Age. From the Park we moved on to Carlton where we crossed the Cornbrash deposits and onto the Jurassic Clay. Although the geology wasn't always visible from the road, we noted the changes in the landscape along the way. We did get to view the local Jurassic Great Oolite with a short stop at Bromham Bridge. From there we went to Stewartby and over the Oxford Clay to the Marston Vale Country Park, then onwards to Apsley Heath and the Lower Greensand. Finally, despite the odd roadworks along the route we all managed to reach our final destination of the chalk escarpment of the Dunstable Downs and we enjoyed the view from the top with a cup of tea and a piece of cake.

The highlight of the trip for me was the stop at the disused Segenhoe Church. A little gem hidden way, just behind the village of Ridgmont. It has an eclectic mix of local building stone and architecture. A very serene place.

The excursion was both comprehensive and informative. Bev had produced fact sheets for each stop and had even managed to throw in a quiz along the way too. So on behalf of all of us on this 'drive through', a big thank you to Bev for organising it. It was great fun with good weather thrown in for good measure.



If you wish to do this drive yourself, then you can find a copy of the leaflet that Bev produced on <http://www.bedsrigs.org.uk/leaflets/BLGGDrive.pdf>

May Day Fun in Leighton Buzzard

By Peter Lally

Camaraderie and banter kept spirits high on a cold showery May Day Fayre in Leighton Buzzard. Lindsay Hiles, Bev Fowlston and Peter Lally set-up the B&LGG displays of information leaflets, local Bedfordshire stones, fossils and building bricks and a small selection of pocket money 'jewellery' stones for the public to purchase. By lunchtime we were accompanied by the arrival of morale boosting support from Janet & Tony Baker and Malcolm Oliver.



Despite the weather, we were pleasantly surprised at the number of people interested in Geology, only surpassed by the main attraction for both children and adults purchasing the mineral stones and fossils and therefore raising £46 towards the Group's funds. We also recruited new members too!

This turned out to be an event that was worthwhile holding and something to repeat next year if support is available. The May Fayre venue was the first of two events in the Leighton-Linslade area for B&LGG to satisfy the prerequisite of holding Events in the Borough, and therefore qualifying for a £370 Grant from the Council. The second Event will be held at the Leighton-Linslade Canal Festival on the 26th July. If you are able to give your assistance, be it for an hour or so, at the Canal Festival in July, please contact Lindsay, who will be most grateful for your help.

Don't forget to book your place for Hunstanton and the Mendips!

Contact Lindsay Hiles and Martin Whiteley respectively.

Keep checking the website for events being held this summer and autumn.

Events and Contacts

Don't miss the next event

Sun 14th June - Bedford Building Stones Walk

Dates for your diary

Sun 14th June - 10.15am

Bedford Building Stones Guided Walk with Anne Williams. Meet on Bedford Bridge (by Swan Hotel), parking available on embankment or Riverside Car Park.

Sat 4th July - all day

Field trip to Hunstanton's red chalk cliffs, for more details contact Lindsay Hiles.

Weekend 2nd-4th Oct

Field trip to the Mendips, contact Martin Whiteley for more details.

Dates of Promotional/Fossil Fun Days

Bedfordshire County Show 11/12th July
(unfortunately, due to lack of support we have had to decline attendance at this above event, for which we were offered a free stall.)

Leighton-Linslade Canal Festival 26th July

Harrold-Odell Fossil Fun Day 16th August

If you can help out on any of the above please let the committee know a.s.a.p.

If there is an event you would like to see then please let John Wong know and he will aim to organise it.

For more information on any of the events, please contact John Wong at the details below.

For more detailed reports on recently held events, go to the Events page on the website at

<http://www.bedsrigs.org.uk/reports.html>

You can see written reports and images of all our recent events.

B&LGG Geodiversity Photograph Competition 2009

Thank you to all who sent in photographs for this competition. The decision to choose a winner is always difficult, and therefore, we have chosen 3 diverse subjects to depict Geodiversity in Bedfordshire.

1st is Anne Williams with Photo of Deepdale Quarry in Woburn Sands, Potton.

2nd is Jan Munro with Photo of Houghton Regis Quarry.

3rd is Ray Piercy with View across Sundon Hills.

To see the winning images please look at the website.

www.bedsrigs.org.uk

Membership information

Individual membership is £7.50 per annum.

Group membership is £25.00 per annum

(Available to organisations that have 4 or more employees or members wishing to join B&LGG)

To continue to receive this newsletter by email or post then you must renew your membership. This newsletter is not the only benefit of remaining a member of the B&LGG; all our events for members are **free of charge**, non-members must pay £2.00 to attend.

You can renew now by either:

1. Sending a cheque made payable to B&LGG
2. Requesting and completing a Standing Order form

Both available through contacting:
Lindsay Hiles B&LGG Secretary, 4 Phoenix Close
Leighton Buzzard, Beds LU7 3YW

*Remember without you - the members - this Group does not exist.
We need you!*

Don't forget your membership was due on 30th March!

Committee Members 2008 - 09

Chairperson

Secretary

Treasurer

Membership Secretary

RIGS Manager & BNHS representative

Education and Schools Liaison

Chalk Downs representative

Beds CC & Biodiversity Forum rep

Field Events Organiser

PR/Promotions/Fundraising Officer

Peter Lally

Corinne Calligan

Richard Cox

Lindsay Hiles

Dr Martin Whiteley

Richard Dowsett

Janet Munro

John Comont

John Wong

Vacant

e: plally65@gmail.com

e: corin@waitrose.com

e: membership.blgg@btinternet.com

e: mjwhiteley@yahoo.co.uk

e: jan.munro1@ntlworld.com

e: john.wong@hertscc.gov.uk