

Newsletter

BGG visit private quarry

Friday May 13th

By Frances Maynard & Henrietta Flynn

In May the BGG were privileged to be able to visit Silsoe Quarry which is on the edge of the Greensands Countryside Landscape Partnership area (part of the Secrets of the Sands project). This is a private working quarry providing facing sand for the brick industry. Thanks go to Bev Fowlston for getting permission and gate keys to enter the quarry site.

It features some extensive faces showing excellent sedimentary structures and some impressive trace fossils and iron nodules. Although not a designated LGS the site may become available to BGG as an excellent example of the geological features within the Lower Greensand. It also has potential as an excellent educational location.



This quarry was new to most of the group so the team spread out to examine what it had to offer. After much rummaging in the undergrowth and steering clear of the dangerously slumped material we identified areas for tree and vegetation clearance which would expose the best rock faces. One particularly section of the exposure was worth closer examination. We measured and examined it and identified a face that could be cleaned up and protected. This section showed excellent cross bedding, erosional surfaces, trace fossils and burrows.



As part of the Secrets of the Sand project this site could be incorporated into the Clophill Geological Trail as a link with the Two Moors Heritage Trail. Our hard work was rewarded with an excellent lunch at the Flying Horse pub in Clophill. Well worth a visit .

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The Two Moors of Flitwick and Flitton

By Frances Maynard

In April the BGG held a field trip to explore the Two Moors of Flitwick and Flitton. The eponymous moors form the 'Heritage Trail' starting in Flitwick and continuing for a 5-mile circuit through Flitton and back to Flitwick. The walk allowed us to explore ecosystems rarely found in Bedfordshire including acid peat and grassland plus *alder carr* and woodland.



Seventeen members and friends came on the walk on a mild, sunny Sunday. Peat had formed in the area following the last ice age that reached this far south (over 40 thousand years ago). The ice sheet had gouged out depressions in the valley floor where any dying vegetation fell into deep water which covered it and prevented it from decomposing with oxygen. The deoxygenated vegetation would form the carbon rich peat over thousands of years. Over time, the formation of peat is often the first step in the geological formation of other fossil fuels such as coal, particularly low-grade coal such as lignite. In places the moors were now agricultural land taking advantage of the good soils. Other parts remain as woodland and an important nature reserve run by the Wildlife Trust.



The Two Moors were the site of peat extraction for gas filtration up until the 1960s. The water, which features *chalybeate* (or iron salts from below the water table), was also extracted and sold as a 'remarkable mineral water with exceptional medicinal properties' between 1893 and 1930 by the Flitwick Chalybeate Company. The naturally iron rich water can still be seen today in the form of reddish deposits.

At the half way point we were pleased to pause at the new Flit Valley Heritage Discovery Barn set up by the Friends of Flitwick Moor and featuring some impressive display boards, including one of the local geology.

Details of the trail are available from The Greensand Trust website: <http://greensandtrust.org/FDHG/>

Honorary membership for founder BGG member Malcolm Oliver

As a special honour for all his hard work with the BGG, the committee decided to give Malcolm an honorary membership. Malcolm was one of the founding members of the B&LGG (Bedfordshire & Luton Geology Group) from its original status as a RIGGS group. That was back in 2005 when Malcolm was elected as the first Chairman.

The man from Wing (actually in Bucks!) told us what he's been up to recently:

MALCOLM'S MEANDERINGS

Why is retirement so busy and why do the excellent BGG events seem to clash with all my prior commitments?

Commitments within my village of Wing have also escalated. Bucks County Council have a Biological Notification Site – 'Long Spinney' – comprising three Biological Action Plan rare habitats of wet woodland, meadow and pond. The site was on their advertised circular walk but had been closed for a number of years due to H&S. There was a real danger that access to the area would be lost to the village. Getting involved resulted in volunteers acquiring a 99-year lease – with a brand new Public Footpath linked to new paths and bridges, planting of 400 new trees, digging of ditches, introduction of a Scout activity area, bird and bat boxes and much more.

Of course the group needed a 'chairman'!! That led to my involvement with the environmental aspects of the Wing Neighbourhood Plan, including liaison with developers to reduce initial proposals of 100 homes to just 52 and getting significant new open space with ponds, boardwalks and new paths connecting to the Spinney. Hopefully we will achieve the aim of getting the whole up to County Wildlife Status.

If that wasn't enough, contacts persuaded me to stand for the Board of HF Holidays and I got elected at the beginning of last year and have been asked to chair the Board this year. It all takes time but lots of interest and also visits to interesting places and doing things outdoors.



Malcolm beside one of the gates he installed to the local Spinney.

Geology and Geomorphology are still one of my passions so I do hope to see everyone sometime but please bear with me if it isn't sometime soon! I wish all BGG members the very best and thank the committee for the honour of lifetime honorary membership.

Malcolm

*Thank you Malcolm.
You've certainly been busy!
We'll be in touch for your geomorphology expertise.*

Biddenham gravel pit clearance

By Anne Williams

Matthew Edgeworth, Janet and Tony Baker and myself braved the rain to clear part of the gravel pit exposure at Biddenham.

The warm wet summer had resulted in a great jungle of plants between the gate and the face, so most effort went in to hacking a way through with sickles and loppers.

We only cleared the slipped gravel to deepen the exposure a little and create a narrow platform. It is not the kind of site to display its features for long as it is so unconsolidated but we can manage the vegetation and a small section of gravel in the future.

Thanks to Liz and Keith for letting us park on their drive!

The information board is now in place.



Greensand Country Landscape Partnership Update

The latest news on this project is that we have started to apply for match funding for the first phase of the project to begin in January 2017.

Phase one will involve the Eastern Geotrail, a new circular walking trail, and an enhancement of Sandy Warren Lodge Quarry LGS, along with possible improvements to the Potton Scout Hut Quarry access for disabled users.

This exciting phase will also provide a new general interest leaflet to replace the older ones of the Greensand currently on our website.

At this stage, until we receive funding, it is a waiting game. Therefore, please watch this space and I will keep you informed.

Bev Fowlston.

Did anyone get it all correct?

Answers to last newsletter's Geology Crossword

Across

- 2 Rocks formed by sediment consolidation **Sedimentary**
- 3 A monoclinic pyroxene **Augite**
- 5 Wrote The Origin of Continents and Oceans **Alfred Wegener**
- 7 Concept of the motion of plates **Continental drift**
- 11 Major rock type **Metamorphic**
- 13 One big landmass **Pangea**
- 14 Geological time above Era **Eon**
- 15 Process in making sedimentary rocks **Cementation**
- 16 Outer layer of earth **Lithosphere**
- 20 Type of moving plate **Convergent**
- 21 Green monoclinic mineral **Epidote**
- 23 From the wind **Aeolian**
- 25 Made of plant remains **Coal**

Down

- 1 Elongated faulted valley **Rift**
- 2 Creating new crust **Sea floor spreading**
- 4 Cut polished stone **Gem**
- 6 Made of magma **Igneous**
- 8 Changed limestone **Marble**
- 9 Micro matrix of limestone **Micrite**
- 10 Displacement in earth's crust
- 12 Extrusive alkaline rock **Trachyte**
- 17 Bottom of desert basin **P Playa**
- 18 Removal of sediment **Erosion**
- 19 What forms mountains **Folding**
- 22 Stage in Upper Triassic **Norian**
- 24 Coarse foliated rock **Gneiss**

Forthcoming Events

Event	Date	Time and Place
<p>Fossil and Rocks day at The Higgins Museum, Bedford. 'Ask a Geologist'</p> <p>A chance to look at some of the samples at the Higgins and also bring along your own samples for identification. 'Hands on' workshop to look at minerals and thin sections.</p>	Sat 23rd July	<p>10.30 am</p> <p>Barbican room in the museum</p>
<p>Potton Show – a chance to display our work to the villagers of Potton. Includes a craft fayre.</p>	Sat 10th September	St Mary's church field, Potton
<p>Annual General Meeting and walk of the Stockgrove Geotrail (now renamed the Rushmere Geotrail).</p> <p>Your chance to talk to committee members and get an update on the year's activities and progress.</p>	Sun 9th October	<p>Stockgrove Visitor Centre or at Heron's View Visitor Centre in Rushmere Park. Time to be decided.</p> <p>Details in email to follow</p>
<p>Capability Brown walk</p>	November	Amphill Park. Details in email to follow
<p>Xmas Social, buffet & quiz</p>	Thurs 8th December	TBC. Possibly in Aspley Guise Hall
<p>Talk by Bev Fowlston - 'Introduction to the Geology of Bedfordshire'</p>	January	TBC

*We look forward to seeing you at one or more of these events.
Please note these events are subject to change so watch out for more details
on each event nearer the day.*

*Details can be found on the website:
www.bedfordshiregeologygroup.org.uk
on our Facebook page
<https://www.facebook.com/BedfordshireGeologyGroup/>
or on Twitter <https://twitter.com/BedfordshireG>*

Snippets of geological news

Heard of something in the news that might interest our members? This is your newsletter—please share your thoughts and news here.

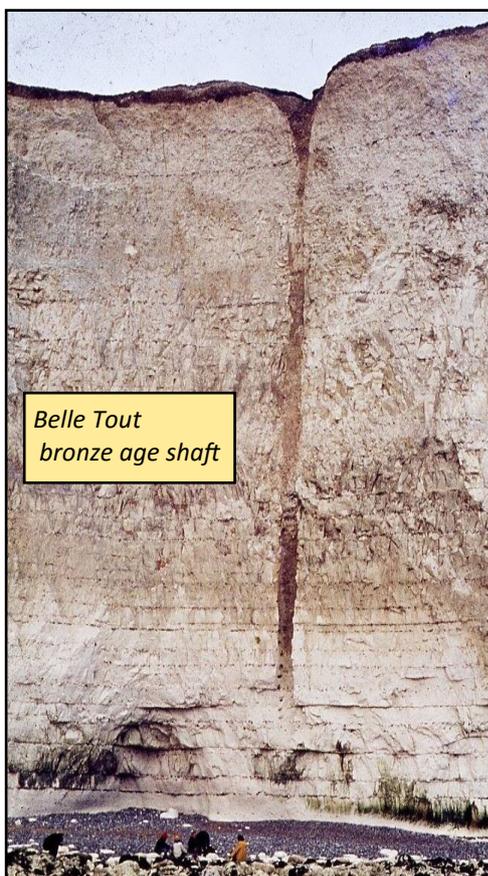
email henriettaflynn@btinternet.com

Anne Williams sent us an interesting piece from the **CITiZAN** (Coastal and Intertidal Zone Archaeology Network).

CITiZAN volunteers have been carrying out sterling work on the South Downs at Birling Gap, hunting for the base of the Belle Tout shaft; a Bronze Age shaft cut the entire depth of the chalk cliff and revealed in a cliff fall in 1976.

A beautifully cut circular shaft complete with hand and foot holds as well as visible tool marks sat in perfect section, stretching nearly 40m from the wave cut chalk platform on the foreshore right up to the top of the cliffs.

In November 2015 CITiZAN in partnership with Allen Environmental Archaeology, the National Trust wardens and volunteers of Birling gap initiated a foreshore monitoring project to try and locate the base of the shaft. Monitoring of the foreshore brought its reward when the searchers found the base earlier this year. You can read all about the shaft, the shaft search and the subsequent excavation at www.citizen.org.uk/blog/2016



Belle Tout
bronze age shaft

Ever heard of ichnusaite?

Researchers have categorised all the Earth's rare minerals

At the beginning of 2016, the International Mineralogical Association approved 5,090 mineral species, fewer than 100 of which make up 99% of Earth's crust. Of those 5,090, around 2,550 are defined as rare occurring at five or fewer locations worldwide.

"Most mineral experts are familiar with at best only a handful of these obscure rarities," said Dr Robert Hazen of the Carnegie Institution, citing the mineral Fingerite from El Salvador as 'a perfect storm of rarity.'

Fingerite forms under extreme conditions, from rare elements, As it is water soluble it disappears when rained upon. It comes from



dangerous volcanic fumaroles so is rarely collected. Consequently, fingerite is only known from near the summit of the Izalco Volcano in El Salvador.

According to Dr. Hazen, a mineral called **ichnusaite** is another true rarity, created through a subterranean mash-up of the radioactive element thorium and molybdenum, with only one specimen ever found, in Sardinia a few years ago.

"If you wanted to give your fiancé a really rare ring, forget diamond. Give her Sardinian ichnusaite," he said.

Bricks & Rocks

By Bev Fowlston



In May, Emma and I took along a car boot load of bricks and rocks to the Luton U3A Geology Group that used to be run by the late Mike Rainbow. You are probably asking why?

I have devised a new talk entitled "**Bedfordshire's Industrial Geology**". It's amazing how interested people are in bricks!

The talk went down very well with this small select group of amateur geologists and lots of questions were asked.

The talk covered the Jurassic clays of north Bedfordshire and its use in the brick industry that has shaped Bedfordshire's landscape and communities, to the use of chalk from the Stone Age to today and everything in between.

If this is a talk that may interest you, as a member, then do let our Events Coordinator know and I'm happy to give that talk to you too.

Vacancy on the BGG committee

Our current Events Co-ordinator, Frances Maynard is looking to step down due to work commitments. We are looking for her replacement.

This role could be shared so perhaps you know someone to join up with?

If you are you a good organiser and communicator, can spare some time and share our love of the countryside and geology then please contact a committee member (see details on page 8) or get a run down on the role from Frances.

BGG needs YOU!

Committee Member Profile

In this issue, Jan Munro, our Chalk area and BNHS representative has given us her profile and an insight into how she developed an interest in geology.....

I was always interested in the natural world and even as a 2 year old was filling my mother's kitchen with snails. Dad & Grandad were keen anglers and I often went along for the ride, getting to explore the countryside with a freedom that today's kids can only dream about.

An interest in science was with me throughout my school days, particularly geography but only the physical side of it – you can keep your transport and settlement thank you! Initially I didn't go to uni. I was a retail manager for a fashion chain called Chelsea Girl until I had a family. I married and had kids at a young age. A legacy from my Grandad allowed me to do an OU Environmental Science course and geology was a module. The rest is history.

I went to work for the County Council in 1992 managing Dunstable Downs visitor centre and doing practical work like scrub clearance outside. After that, in 2008 I moved to Harrold to work and I'm still there today. At the age of 62, I'm still felling trees, teaching school parties and ordering volunteers about.



I was introduced to BGG when Malcolm Oliver came into the visitor centre where I had some miscellaneous fossils on display on the nature table. He suggested I might like to join which I duly did. The group is a brilliant way to relive that childhood, scrambling around the countryside looking at the natural world. The only difference is – now I can go to the pub!

Thanks Jan for sharing your profile, yes we do a fair bit of scrambling around with the BGG!

Here's the BGG Committee

Chairperson	Peter Lally	plally65@gmail.com
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If you wish to include an article, photo or share your geological interest in the next issue, then please contact me by email at

henriettaflynn@btinternet.com

Hope you enjoy the read!

As always please look at our website for the latest news, details of events, lectures etc. It is also a great source of educational information and so easy to download our wide range of brochures, flyers and geotrails.

www.bedfordshiregeologygroup.org.uk