

Welcome to GeoSuffolk Times, keeping you up-to-date with geodiversity news, achievements and activities in Suffolk. Please pass it on to anyone who may be interested.

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Charles Darwin and Suffolk

2009 is the 150th anniversary of the publication of Charles Darwin's *On the Origin of Species* and there have been major exhibitions in Cambridge and London to celebrate his life and work. Does he have any connections with Suffolk? To Darwin, geology was a 'capital science' and his major contribution to Suffolk science, *The Fossil Balanidae and Verrucidae* was published by the Palaeontographical Society in 1855. This was a monograph of the fossil barnacles of our Suffolk Crag deposits – very detailed and still the definitive work; *undulata*, *bisulcatus*, *dolosus*, *inclusus* and *barbara* were new species named by Darwin. A less direct connection was an Ipswich Museum lecture on Geology by the Revd. Professor John Stevens Henslow (who recommended Charles Darwin for his voyage on HMS Beagle) in November 1849, when coral material 'received from Mr Darwin' was used to illustrate the lecture.

Bob Markham (RM)

Festival of Geology

This annual public event is run by the Geologists' Association and has a lecture and field trip programme as well as displays by geology groups from all over the country. This year it was at University College, London, on October 31st.

GeoSuffolk's *Friends of the Pliocene* themed stand showcased site management work at Sutton Knoll. As well as ongoing care of the exposures at the SSSI it is planned to extend the 'Pliocene Forest' which interprets the Coralline Crag pollen record. The 'Pliocene' *Sciadopitys* specimen we had on our stand was a big success attracting a lot of attention. Postcards of Louis Wood's beautiful reconstruction of life in the Red Crag sea, *Suttona Antiquior*, commissioned for the Sutton panel opening (see GeoSuffolk Times no.1), were on sale. (Please contact me if you would like to buy one/some of these – CM.)

Have you Visited

the Abbey Gardens at Bury St Edmunds?

The beautiful gardens of 'God's Square' (after Sir John Betjeman) make an interesting Christmas holiday geodiversity walk. The rubble walls of the Abbey ruins provide a wealth of different limestones – look out for fossil gastropods in the Barnack Stone. There are also flints, chalk fragments, and a large block of quartz in the South Transept. North of the Abbey, the memorial in the John Appleby Rose Garden is pink Swedish granite, and the Dunkirk Veterans Memorial is Carboniferous Limestone with fossil corals. Don't forget to visit the Ginkgo tree (a Jurassic survivor) across the path from this memorial.

The Cathedral itself is built of a variety of Jurassic limestones (don't miss the fossiliferous limestone in the steps to the Treasury) – for details of these and a map of the geodiversity of God's Square see www.geosuffolk.co.uk CM

Footnote

The GeoSuffolk information sheet on God's Square, Bury St Edmunds, (Notes no.10) mentioned above needs updating. The Rock & Brick Store has been removed and the Cloisters have been extended. Have a look at the beautiful interior stone in the new Cloister – it is Ancaster Stone from Lincolnshire, a pale cream Jurassic limestone with oolite grains, shell fragments and a calcite cement giving it an attractive glistening surface. RM

Ipswich Museum Lecture

On February 27th 2010 Bob Markham's lecture will be *Survival of the Dead* – a 'down to earth' look at what happens to humans (and others) after death, both burial and cremation, and sometimes becoming a fossil. Details available from Ipswich Museum.

The Minerals Specific Site Allocations document was adopted by Suffolk CC on 24.09.09. It allocates 23 sites suitable for sand and gravel extraction throughout the county up to 2021. Download a copy at www.suffolk.gov.uk

Suffolk GAP News for Partners in GeodiversityWhither the GAP?

Following a national initiative, a Draft Suffolk Geodiversity Action Plan (GAP) was produced in 2006. A meeting in Bury St Edmunds, a proposal for a revised 'Partners' Pages' GAP, and meetings in Santon Downham, Needham Market and Ipswich followed, with invaluable feedback – thank you all. It has become apparent that people mainly require information – both academic and practical – rather than 'plans' and thus GeoSuffolk is preparing a new-style *Earth Heritage Suffolk: Action for Suffolk's Geodiversity* document for 2010. It will be in the form of a 'handbook' (Geodiversity Action Pack!) Use it for your plans and inspiration! RM

Suffolk Coast and Heaths AONB

In Suffolk we are lucky to have a coastal area of varied and often unique geodiversity, giving rise to a landscape of stunning natural beauty. It is a designated Area of Outstanding Natural Beauty, administered by the Suffolk Coast and Heaths Unit in partnership with a number of local organisations (www.suffolkcoastandheaths.org). There are 25 geological SSSIs in the AONB and, in addition, GeoSuffolk has recently supplied information on 20 publicly accessible County Geodiversity Sites to the SCH Unit. These include such geological gems as Westleton Common (Norwich Crag gravels), the Butley Forest Pit (Red Crag), Newbourne Springs (at the Red Crag/London Clay junction), Nacton Shore cliffs (London Clay) and Thorpe Ness (a dynamic coastal landform). CM

Totally Chalk-tastic

This Ipswich Museum/GeoSuffolk event had about 50 people attending on September 26th. The craft work *coccolith crowns and foraminifera mobiles* was enjoyed by children and contributed greatly to the understanding of micro-fossils in the Chalk. In the geology gallery identification sheets with 'hands on' specimens (echinoids, ammonites, bivalves, belemnites), the Chalk-related display cases and the research collection of Chalk belemnites gave children and adults plenty to question and discuss – a worthwhile and successful day.

Colchester and Ipswich Museum's Service

Congratulations to Ipswich Museum for winning the award for the Best Small Attraction in the 2009 Tourism in Suffolk Awards.

Also this year, in April, a new geology and climate change gallery opened in the Natural History Museum in Colchester – look out for the fossil trout from Marks Tey and the serrations on the *megalodon* (giant shark) teeth.

Ipswich Town Hall and Corn Exchange

The façade of Ipswich Corn Exchange (to the rear of the Town Hall) was cleaned earlier this year, revealing anew the white Portland Stone and the pilasters of Dumfries Red Stone (from the Red Sandstone of Ayrshire, also much used in buildings in Glasgow).

At Ipswich Town Hall itself (orange-brown Bath Stone, some Portland Stone and pillars of Mansfield Stone), an exhibition in May-June this year was *Unknown Paintings of an Ipswich Architect (Birkin Haward 1912-2002)*. Born in Ipswich, where he practised as an architect, Birkin Haward took a great interest in local resources and transport, see pages 92-96 of his *Suffolk Medieval Church Arcades* SIAH 1993, for information on Walling Materials, Freestone and the Transport of Stone. RM

Polstead Church 'Tufa'

When I wrote the *GeoSuffolk goes to church in south Suffolk* leaflet (see www.geosuffolk.co.uk) I accepted several authors' statements that the internal arches were of tufa rock (I couldn't reach them to have a close look!). I recently read an article by John F Potter in *Landscape History*, volume 23 (2001) stating that the arches were not tufa but of ferruginously-cemented sand. This necessitated another visit to Polstead and a vertiginous inspection of the lowest two stones in one of the arches – they are not calcareous, are ferruginous and are fine-grained. More work is obviously needed and meanwhile please correct the information on the leaflet! RM

South Felixstowe Coastal Defences Scheme

This scheme won the Physical Achievement Award of the Institution of Civil Engineers' East of England Merit Awards for 2009. It involved installing rock fishtail groynes between the War Memorial and Landguard Common and replenishing the beach with dredged sand and gravel. The project was carried out by construction contractor Team Van Ord on behalf of the clients Suffolk Coastal District Council and the Environment Agency, with Royal Haskoning as project managers and Black and Veatch as designer. The scheme brought in Carboniferous Limestone via Boulogne, France, larvikite from Norway, and sand and gravel dredged from the Thames estuary – the latter deposit yielding fossil mammoth teeth to local collectors! RM

Footnote

Studying this section of beach for Geography GCSE coursework in July 2009 produced unanimous approval for the wide sandy beaches and rocky outcrops from my 15-16 year old students. A fine example of sea defences in an urban context. CM