

Welcome to issue number 25 of our GeoSuffolk Times - for those who value Suffolk's geodiversity. Caroline Markham 21.07.15

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The City of Ipswich

The City of Ipswich lies on the Ipswich Coalfield, its non-marine rocks of Middle Triassic to Early Jurassic age later being folded and faulted to form the Ipswich Basin. The west end of the main street is on Triassic-age Ipswich Coal Measures, the east end on Tertiary basalt. Ipswich and East Ipswich railway stations are on Tertiary basalt, whilst Little Ipswich station is by the junction of Tertiary sediments with the Ipswich Coal Measures. The West Ipswich Fault affects Triassic strata and is overlain by Tertiary sediments. The Ipswich Coal Measures, worked in many coal mines, have yielded a rich fossil flora characterised by the seed-fern *Dicroidium* and two prolific fossil insect horizons, predominantly of beetles. Sounds like a great place for a field trip. Don't forget to get your map of Queensland, Australia! Bob Markham (RM)

Great Waldingfield Church

One of the panels of marbles in the reredos here is illustrated in our leaflet, *GeoSuffolk goes to church in South Suffolk* (2007). Revd. Charles Albert Stokes tells us more in Proc. Suffolk Instit, Archaeology 1895. Its marbles were collected by Emily and Louisa Baily from the ruins of temples in Rome and elsewhere. The 'oriental alabaster' (calcium carbonate) forming the cross in the reredos came from a small temple near the Sphinx, the granite in the slab over the credence is from Mount Sinai (Gebel Musa), and the syenite from a fragment of the statue of Rameses II at Thebes. For more information on marbles in Rome, *The Seven Hills of Rome: a Geological Tour* by Grant Heiken et al, (2005) tells of multi-coloured breccias from Africa; white and black 'antique' from the French Pyrenees; white and red 'pavonazetto' breccia from Asia Minor, and sheared and veined red and white Cottanello marble from the Sabine Mountains. G. Borghini in *Marmi Antichi* (1997) gives examples of rock types used in Rome, especially marbles. Images of Faustino Corsi's collection of decorative stones at Oxford University Museum can be explored at www.oum.ox.ac.uk/corsi/; he collected stones from the ruins of ancient Rome. RM

Pliocene Forest News

To commemorate the work of British researchers Clement and Eleanor Reid on the Dutch Reuverian (Late Pliocene) flora, GeoSuffolk is adding some of its distinctive representatives to our Pliocene Forest at Rockhall Wood SSSI in Sutton. This will also enable us to demonstrate and discuss the local Coralline Crag pollen flora compared with the Reuverian Clay seed flora. Whilst browsing the Reids' 1915 Reuver monograph (kindly lent to me by Barry Hall) I noted that the *Pterocarya* (including Brunsummian, early Pliocene specimens) are given as *P.limburgensis* Reid & Reid (i.e.nov.sp) – perhaps we can now extend this name to our Coralline Crag *Pterocarya* (wing-nut) fossil. RM

Pliocene Plant Profiles

Hot off the press, the 2nd edition of Barry Hall's booklet contains descriptions of representatives of the Reuverian flora planted at Sutton as well as old favourites from the Suffolk Pliocene pollen record. It has expanded to 47 pages, with colour photos of all species. Here is a taster plant profile from Barry:

Ilex aquifolium

Hollies are good indicators of general woodland health with evergreen *Ilex aquifolium* quite common in deciduous forest, being able to withstand summer drought and winter frost. Bright red and yellow berries, more accurately 'drupes' are rich in caffeine, favoured by birds and sought after for Christmas decoration. Wind-felled trees can form a labyrinth of trunks from prostrate stems and branches. Exceptionally, they can live for 500 years or more. Following the Pleistocene glaciations holly re-established itself and is now regarded as one of our true native trees. At Staverton Park near Butley there exists an ancient unmanaged forest wherein are many breathtaking specimens of this magnificent tree.

Pliocene Plant Profiles 2nd Edition costs £5 (£6.30 with P&P), please email info@geosuffolk.co.uk – or visit Sutton Country Fayre on August 23rd where there will be copies for sale on the GeoSuffolk stand. CM



Partnerships Column

Westleton Common Pit

Our Suffolk pits are records of times past – access to local raw materials for our predecessors. They are our windows on the past, both ancient and recent, and we should strive to retain those that still exist. GeoSuffolk is much indebted to Suffolk Coast and Heaths AONB for its help refreshing some of its CGS pits. Most recently, on June 18th we cleaned up some of the faces at Westleton Common Pit. The site is managed by the Westleton Common Group and, with their approval, we cleared part of the south face of the pit, showing closely interbedded sand and gravel units. Individual beds are up to 1m thick and well-graded - large gravel with rounded chattermarked flints up to 6 cm, or small gravel or sand. These exposures of 1¾ million year old Norwich Crag sands and gravels are locally known as Westleton Beds and have long been studied by geologists from the time they were first named by Joseph Prestwich in 1871. CM

Knettishall Fair 2015

Join us at the GeoSuffolk stand at this Suffolk Wildlife Trust event at Knettishall Heath on August 23rd. There will be information on the patterned ground landscapes at Knettishall, plus Breckland geology and a chance to buy Richard West's excellent new book – see GeoAnglia →

Ipswich Museum Discovery Zone

Join GeoSuffolk at our stand at these Tuesday museum activities in August:

- 4th Space: asteroids, meteorites and more.
- 11th Bones and Teeth: fossils of small animals.
- 25th Countries and Cultures: rocks, fossils and minerals from all over the world.
- Also - on Wednesday August 19th Show and Tell: bring your own geological specimens for identification by GeoSuffolk.

Ipswich Heritage Open Days 2015

GeoSuffolk will be at the Ipswich Society gazebo at Blackfriars if you would like to take a look at the London Clay septaria of these medieval ruins. September 12th-13th - for HOD booklet see www.ipswichsociety.org.uk.

Calcrete Monoliths

The 'Cookley Rockstone', a calcium carbonate-cemented mass of sand and gravel (calcrete) once stood as a 10 feet high monolith in a gravel working at Chediston. The area is now a garden and the Rockstone, slightly reduced in size, lies prone. In 1872 H K Creed (Proc. Suffolk Institute) recorded (and illustrated) a number of such monoliths at Mutford Wood, east of Beccles – they were between 3 and 7 feet in height. Another example has been drawn to my attention by Dr John Blatchly in the East Anglian Daily Times 11.07.15. A drawing (now in the Yale Center of British Art) by Isaac Johnson shows monoliths in a pit in Ringsfield, west of Beccles – their cross-bedding is clearly visible. Consolidation of the sand and gravel generally comes by infiltration of lime from overlying chalky boulder clay. RM

Clay-Lump

The East Anglian Earth Buildings Group featured in the Eastern Daily Press 29.06.15, www.eartha.org.uk Clay-lump blocks are made from chalky boulder clay mixed with straw (binding agent) and sun-dried. Old Series Geological Survey Memoirs record a pit at Hockwold, Norfolk supplying many cottages in the village and the 'lump-pit' at Brockdish, Suffolk. Clay-lump 'bricks' may be seen on display at the Museum of East Anglian Life at Stowmarket. RM

Geo-Anglia

- A new book by Professor Richard West has been published by the Suffolk Naturalists' Society (with help from GeoSuffolk and the Geological Society of Norfolk). A detailed analysis of sediments in pits near Beachamwell, Norfolk and survey of the periglacial landforms in the area, provides valuable information on the evolution of the landscape in the Wolstonian Stage of the Pleistocene in East Anglia. 40 pages of excellent illustrations accompany the text. *Evolution of a Breckland Landscape: chalkland under a cold climate in the area of Beachamwell Norfolk* is available from SNS at Ipswich Museum (£10) <http://www.sns.org.uk/pages/books.shtml> CM
- The Time and Tide Museum in Great Yarmouth is currently hosting an exhibition from the Natural History Museum – *Humans in Ancient Britain*. It runs until September 6th and is accompanied by 'Friday Talks' by well-known geologists. See http://www.museums.norfolk.gov.uk/Visit_Us/Time_and_Tide/index.htm
- Get Rid of Fossils? – The Eastern Daily Press 30.05.15 reported that the University of East Anglia has rejected calls from academics to stop investing in the fossil fuel industry. The accompanying picture shows academics (?) with a giant banner displaying 'Fossil Free UEA'.