

GEOSUFFOLK TIMES

Welcome to issue no.35 of GeoSuffolk Times – for those who value Suffolk's Geodiversity. Caroline Markham 26.01.18 www.geosuffolk.co.uk

Coal and Wind

When I was at school (over 60 years ago) in Ipswich, there were two coal-fired power stations in the town (at Constantine Road and Cliff Quay), coal fires in our homes and occasional days of smog when you had to follow the kerb to find your way home. Today, I can go to Felixstowe to see offshore wind turbine farms and feel sea breezes.

UK mines supplied our coal whereas today mines in the developing world supply materials for wind technology. Global mining (e.g. Kazakhstan and Columbia) and coal consumption (e.g. China and India) are expanding - there are large coal reserves, but their use produces carbon dioxide. Key materials for wind turbines include critical metals such as copper and neodymium – renewable energy produced using non-renewable resources. Bob Markham (RM)

Identification Days 2017

Specimens shown to GeoSuffolk have included, at Colchester Natural History Museum, an *Amoeboceras* (Jurassic ammonite) erratic from glacial till at Flixton (photo in GeoSuffolk Times no.33); at Brandon Country Park, a Neolithic flint axe from Holywell Row and a piece of *Stigmara* (Carboniferous plant) erratic from Camborne, Cambridgeshire; at Ipswich Museum ambergris (?) found on a beach in Mauritius. Examples of this sperm whale bile duct secretion have been claimed as fossil from the early Pleistocene of Italy (Geology vol.41, 2013). Keep a look out in the Crag!

The next identification days: 'Ask the Expert' at Ipswich Museum on February 14th, 10.30 – 3pm and 'Fantastic Fossils' at Colchester Natural History Museum on April 11th, 10-12 and 2-4pm. GeoSuffolk will be at both. RM

The Essex Gem and Mineral Show

February 17th at North Romford Community Centre.

A really good day out!

<http://www.erms.org/erms-show.html>

GeoSuffolk is on Facebook and Twitter – find us at:

<https://www.facebook.com/GeoSuffolk>

<https://twitter.com/geosuffolk>

Sedgwick Museum's New Director

Dr Elizabeth Harper has been appointed Acting Director of the Sedgwick Museum, Cambridge. When young, Liz collected fossils at Ipswich Geological Group meetings and recently wrote to GeoSuffolk: "I started to go to Ipswich Geological Group Meetings sometime in the mid-1970s. Taking my long-suffering father along to actually provide the spade-power I collected and collected. Bulcamp, Battisford, Barham, Aldeburgh Brickworks, Stoke railway tunnel, Sutton Knoll, Sudbourne, Chillesford, Covehithe, Bawdsey Tatingstone, Newbourne, Levington, Alderton, Gedgrave and Ramsholt and probably many more all succumbed to the I.G.G. activities. When the regular newsletter, beautifully written in Bob's hand, appeared it was as if (at least to me) as though some new exotic holiday brochure had arrived. The sun, it seemed, always shone (but perhaps we only attended on those days). And the holes were huge – not, I think, an exaggeration of a child's eye view. Paddling about in the water baled from the bottom of these holes, amongst the piles of spoil, what rich pickings there were to be found." For more information on Dr Elizabeth Harper follow this Sedgwick Museum link <http://www.sedgwickmuseum.org/index.php?mact=News,cntnt01,detail,0&cntnt01articleid=81&cntnt01returnid=15>

An Ice-breaking Tanker

Local ship enthusiasts noted the *Christophe de Margarie* at the Sunk deep draft anchorage off Walton-on-the-Naze in late December 2017. This combined ice-breaker and liquefied natural gas tanker had come from Sabetta, a port on the Yamal Peninsula, NW Siberia, and was the first tanker to traverse the northern sea route (ice was over 1m thick in places) without an accompanying ice-breaker. The large gas reserves being obtained below the arctic tundra of Yamal are from a Cenomanian-Aptian (Cretaceous-age) deposit. RM

Publications

- Congratulations to GeoSuffolk's Judith Hall who won second prize in the Geologists' Association photographic competition at their Festival of Geology in November 2017. Her close-up of the flint flush work on St Mary's Church, Cavendish is published in their 2018 calendar - see <https://geologistsassociation.org.uk/festival.html>
- GeoSuffolk micro-palaeontologist Andrew Snelling informs me that open access to the Journal of Micropalaeontology can now be found at: www.j-micropalaeontol.net
- The *Journal of Breckland Studies*, newly published by the Breckland Society contains (Vol.1, 2017) a paper by R.J. Davies, et al, 'The early Palaeolithic archaeology of the Breckland: current understanding and directions for future research'. It includes a photograph of the ongoing excavations at East Farm, Barnham. CM

AONB Work Parties

This winter has seen two Suffolk Coast and Heaths AONB Work Parties undertaking geological conservation work directed by GeoSuffolk on Red Crag sites on private land. On December 5th we dug out a small pit close to the SSSI at Rockhall Wood, Sutton and on January 23rd we cleared vegetation from part of one of the Red Crag pits in Ramsholt.



This photo shows the east face of the Ramsholt pit. It is about 4m deep, and shows a small vertical fault (between the two holes) with displacement of about 4cm. The strata were rich in phosphate nodules and there were two shelly beds from which we collected examples of the fossil mollusc fauna. We also took samples to investigate for micro-fossils. Thank you SCG AONB volunteers for all your hard work. CM

Stop Press: The Pliocene Forest Open Day at Sutton will be on June 10th this year – further details in the April GeoSuffolk Times.

Lightning Metamorphism in Ipswich

A recent issue (no.50, 2017) of Suffolk-produced Deposits magazine (<https://depositsmag.com/>) has an article on fulgurites in North Carolina, USA. Fulgurites are formed when lightning strikes quartz sand and fuses it to form natural silica glass. Subjected to a temperature higher than the melting point of silica followed by relatively rapid cooling, glass is formed.

In the mid-1930s, a man working in Suffolk Road brickyard (now built over) in Ipswich was sheltering from a thunder storm when he observed lightning strike the ground nearby. Later, he dug up a tube of fused sand from the unconsolidated Reading Sand at that spot. There are pieces of this in Ipswich Museum and in the Sedgwick Museum. The latter piece, about 1cm in diameter, was featured by W B Harland and Jennifer Hacker in *Advancement of Science*, April 1956. RM



A post-Christmas walk in Christchurch Park, Ipswich revealed this coarse gravel (photo above) around a newly-planted tree in the Upper Arboretum – a small, temporary exposure like this can show interesting geology. CM

Paxton Chadwick

I recently obtained a copy of 'The Earth: Rocks, Minerals and Fossils' by Cambridge University geologist W B Harland, Vista Books, London, 1960. (Walter Harland (1917 – 2003) used explosives to investigate the structure of the ground beneath the surface in East Anglia for his PhD). The colour front cover and colour and black and white illustrations in the book are by Paxton Chadwick (1903-1961), artist/illustrator of Leiston, who did drawings for Penguin Books. He used the Ipswich Museum collections of minerals and fossils (in 1959/60) for some subjects and the agate illustrated on page 161 is readily recognised. Paxton Chadwick Close in Leiston is named after him. RM