

GEOSUFFOLK TIMES

Newsletter 44

April 2020

The Quarry at Rockhall Wood SSSI

Welcome to issue no.44 of GeoSuffolk Times.

Caroline Markham 02.04.20 www.geosuffolk.co.uk

Isolation

What an excellent opportunity to explore some websites. May I recommend:

1. Our GeoSuffolk website and its many links.
2. The Geologists' Association Carreck Archive – many of the photographs were taken before the 1914 - 1918 war. Look for, locally, Little Cornard, Tattlingstone, Bramford, Ballingdon and more. [http://earthwise.bgs.ac.uk/index.php/Geologists%27 Association Carreck Archive](http://earthwise.bgs.ac.uk/index.php/Geologists%27%20Association%20Carreck%20Archive)
3. Geology online: *105 sites that rock*, e.g. no.7 Grand Canyon, no.102 Iceland, no.82 Volcano Cafe. <https://geologydegree.org/sites-that-rock/>

Bob Markham (RM)

Odontolite

Whilst recently sorting some Norwich Crag fish bones (which had been in a sealed plastic bag for thirty years) from Sizewell B excavations, I noticed that some exhibited a turquoise-blue colour. This is odontolite or bone turquoise. It is predominantly fluorapatite with the colouring agent being manganese and the way its Mn^{5+} ion is incorporated into the mineral's structure. (See Ina Reicht et al, *American Mineralogist* November 2001.) Within a week no longer sealed in a bag the colour had noticeably faded. RM

GeoSuffolk Notes

Having a little time on my hands, I have typed out RM's GeoSuffolk Notes 37 *Eight Suffolk Geosites* and put it onto our website. The sites, which include Coe's pit in Bramford, Harwich Harbour stone beds and underground Chalk workings in Bury St Edmunds have been listed separately in the Archive at <https://geosuffolk.co.uk/index.php/archive/geosuffolk-notes> . Keep an eye out for more – I should have plenty of time! CM

Calculi

Perhaps some of the more unusual stones sometimes found in our fields are Enteroliths, made from concentric rings of calcium compounds or of struvite, and which form in the alimentary canal, especially of horses. Specimens from Dennington were brought into Ipswich Museum some while ago. They are a form of calculi, pebble-like mineral concretions (and sometimes called 'bezoar stones'). Other calculi deposits formed internally include Gallstones, usually made of cholesterol, and Urolithiasis (kidney stones), some made of whewellite – hydrated calcium oxalate.

RM

Sudbourne Park Pit SSSI

On March 10th GeoSuffolk, with the help from Suffolk Coast and Heaths AONB Work Party volunteers, cleaned up part of the Coralline Crag pit in Sudbourne Park. Left in a poor state by visitors and subsequently overgrown, it was in need of a facelift. Eight of us succeeded, with spades, rakes and wheelbarrows, to make it safe and accessible for future use. The pit is on private land, but the exposure we created can be viewed from the adjacent public footpath. See <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1001649> for more information on this SSSI. CM



The Pliocene Forest 10 Years On

Here is a second article by Barry Hall highlighting some of the specimens in GeoSuffolk's Pliocene Forest (planted with genera from the fossil pollen record of the Coralline Crag) at Rockhall Wood SSSI in Sutton. It is on private land but can be viewed from the nearby public footpath where GeoSuffolk has placed an information panel. CM

Sciadopitys verticillata

With botanical pronunciations varying from *sky-a-dop-it-is* to *sky-ah-doe-pit-is*, the Japanese Umbrella Pine is probably the most unique plant in the Pliocene Forest. We have two, both nearly ten years old, but slow growing at 2 metres with a yellowing of the leaf due to our high alkalinity. An evergreen conifer native to Japan, it has a fossil history at least back to the Jurassic but with evidence for forbears existing in the lower mid-Triassic, 228 mya. It is a monotypic tree today, although more diverse in the past, and thought to share an ancestor of the Cypress family. However, whilst not a cypress neither is it a pine although the 'needles' would suggest an affinity. In reality these are deemed 'cladodes', modified branchlets made of stem tissue having the photosynthetic function of leaves. 'True' leaves are small green scale like bodies, cataphylls, scattered over the lower part of the annual shoot and imbricated into three rows at its apex.



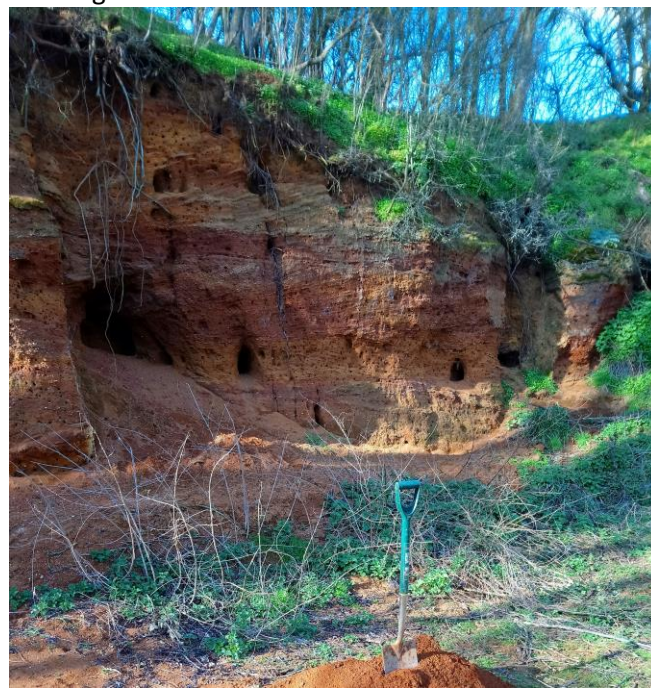
By mid-summer they are autumnal brown and no longer photosynthetic, just supportive. *Sciadopitys* is currently listed as 'vulnerable' due to the value of its wood and slow growth. Modern research has identified the *Sciadopitys* family as the probable source of Baltic ambers rather than the Araucariaceae and Pinaceae previously thought. BH

Coronavirus Crisis Cancellations

Sutton village has cancelled its Open Gardens event, which was to be held on June 7th this year, so the Pliocene Forest will not be open to the public. Likewise, both Ipswich Museum and Colchester Museum are closed, so neither the 'Ask the Expert' on April 8th, nor 'Fantastic Fossils' on April 17th will go ahead. Please use the Events page of GeoSuffolk's website for updates and news of events later in the year. CM

Newbourne Great Pit CGS

This publicly accessible Red Crag pit on the Suffolk Wildlife Trust Newbourne Springs Reserve shows excellent exposures of colourful Red Crag, with horizontal bedding and sub-vertical fissures criss-crossing its face.



On February 25th I visited it to investigate the fissures there in 3-dimensions. An area of ground in front of the talus was cleared and the fissures, which form cracks and hollows in the quarry face, were represented by paler yellow sandy stripes in the darker orange/brown Red Crag in the floor – an interesting discovery to be written up in the Suffolk Naturalists' Society *White Admiral*. CM

GeoAnglia

- The Essex Rock and Mineral Society has published 'Fossils in Essex and Beyond' by Ros Mercer, which shows fossils from the Chalk, London Clay, Red Crag and glacial deposits. Highly recommended for use in Suffolk, this new chart costs £2 and can be ordered by post - see <http://www.erms.org/news.html>
- The latest issue, Bulletin 68 of the Geological Society of Norfolk is available on their website now – and you can catch up on back issues at <http://www.norfolkgeology.co.uk/bulletin.htm>
- In his latest 'Down to Earth Extra' Chris Darmon says that sales of geological jigsaws are up! See www.geosupplies.co.uk or ring 0114 245 5746.