# GEOSUFFOLK TIMES

**Newsletter 51**
**October 2021**

Thorpeness Cliff July 2021

www.geosuffolk.co.uk Caroline Markham 30.10.21

## Journey's End

Suffolk geology is fortunate in having good friends, two of whom, S J (Mac) MacFarlane and Dr Ieuan David, have sadly died this year. Mac was one of the original members of the Ipswich Geological Group in 1966. He wrote a number of articles for the Bulletin (www.geosuffolk.co.uk/index.php/archive/ipswich-geological-group), of special importance being (in no. 16) observations on Stoke Tunnel boreholes. He was active in all of the early 'digs' and may be seen the GeoSuffolk website gallery inspecting a trench at Holcombe Crescent, Ipswich in 1969, and digging at Battisford in 1973.

Ieuan was a research chemist, including working on magnetite and spinels at Imperial College, London (paper in Transactions of the Faraday Society, 1956). He lived many of his retirement years in Sudbourne, contributing an article, 'The Geology of the Sudbourne Area' to Our Village: History: OneSuffolk: Sudbourne, April 2005. Bob Markham (RM)

## The Walpole Stone

RM with the glacial erratic stone on Walpole village green – found recently at a farm nearby and notified to GeoSuffolk by local inhabitants. It is a calcareous sandstone with a few small bivalve fragments identified it as possible Spilsby Sandstone. RM

## Suffolk's County Geodiversity Sites (CGS)

GeoSuffolk has continued to re-monitor its Public CGS over the summer and has visited a further 9 sites since July. The Needham Lake erratic; Newbourne Springs and the Great Pit in Newbourne; Aspal Close in Beck Row; Lakenheath Church; Harkstead Cliff and Shore (more on this on the next page); St Helena's Walks Pit, Dunwich; Westleton Common and Heath Pits.

Flint Cobbles up 10/12cm in size at Westleton Heath Pit CGS

Eight of the nine CGS retained their GOOD status – a big thank you to everyone who looks after them. St Helena's Walks Pit in Dunwich Forest has been securely fenced by Forestry England so that it no longer has public access. GeoSuffolk has therefore de-notified it as a Public CGS. The GeoSuffolk web site has a list of our 28 Suffolk Public CGS at www.geosuffolk.co.uk/index.php/geology-and-sites

CM

## The GA Festival of Geology 2021

The Geologists' Association is holding a Virtual Festival of Geology (VFoG) this year on November 6th/7th. The coincidence with the COP26 Conference suggests a climate change theme. GeoSuffolk is sending a postcard from Sizewell – with photos and data on fossils found under the Sizewell B dome when it was under construction.

See www.geosuffolk.co.uk/index.php/news-and-events/events-suffolk-geocene

## New Research Unlocking the Secrets of Ipswich Museum's Ice Age Collections

The Ipswich Museum's Plio-Pleistocene geological collections have always been central to understanding this key period, and the creation of our modern world. This year, as we emerged from 'Covid-lockdown', it has been a pleasure to oversee the renewal of our research programme. This includes several large international research projects on our collections.

Fossil mammal teeth have the potential to unlock the diets of their now long dead owners, a 'silent witness' if you like. Laura Hemmingham, a PhD student at Royal Holloway University of London and the Natural History Museum, is applying 21st-century techniques, using wear patterns on fossil deer teeth to investigate how deer diet changed with the fluctuating conditions of the ice age. Ipswich's collections will play a vital role in this Europe-wide study, allowing Laura to also 'peer' back further in time to the earlier part of the ice age as charted by the East Anglian crags.

Dr Juha Saarinen, of Helsinki University is just beginning a 5 year project across Europe, Africa, and South America to investigate a combination of tooth wear and also postcranial bone measurements, to explore the relationships between mammals and their environments in the (Cenozoic) past and to ultimately model climate and vegetation. The Ipswich collections will play a vital role in investigating the Pliocene-Pleistocene transition and changing conditions of the ice age.

The well-curated assemblages of Ipswich crag molluscs, including many collected by former Museum Geological Curator, Bob Markham, will also play a key role in helping Dr Andrew Johnson at University of Derby to understand how warm the Mid-Pliocene Warm Period actually was. This period, around 3 million years ago, may be the best comparison for our future region around 2100, with global average temperatures 2-3°C warmer than today. By studying the mollusc shells from the Coralline and Red Crags, more accurate estimations of seawater temperature can be made.

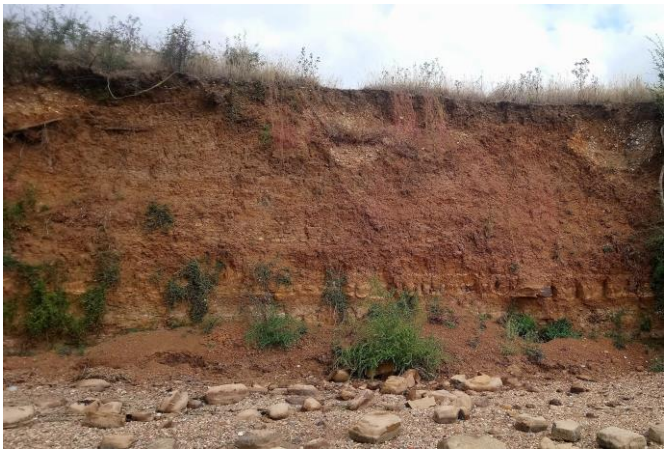
The Ipswich collections are, therefore, helping us to use the recent past to understand our dramatically changing world today.

Watch out for: our type and figured catalogue will soon be searchable on our website.

Dr Simon J Jackson, Collections and Learning Curator, Ipswich Museums (Colchester and Ipswich Museums).

## Harkstead Cliff and Shore CGS

Harkstead Cliff and Shore CGS is designated for its Harwich Formation and its Pleistocene gravels and 'brickearth' deposits. The cliff was in excellent condition when we visited to condition monitor it in September. The photograph shows horizontally bedded Harwich Formation clay with ash bands (yellowish) and the 'Harwich Stone Band' near the base of the cliff, and with fallen blocks on the foreshore. The top of the cliff shows patches of contorted Pleistocene gravel. We found the orange silty 'brickearth' deposit in the southern part of the cliff and on the shore. CM



## Kentish Ragstone in Ipswich

Christ Church in Tacket Street, Ipswich features on the Built Environment page of GeoSuffolk's web site. In response to an article, 'Ipswich Rocks' by CM and RM in the Ipswich Society Newsletter January 2021, Andrew Kleissner, former Minister (2005-2017) of Christ Church has informed us that the main structure of the building is in fact made of brick and that the Kentish ragstone is cladding. He also says that if you walk down the passage at the side of the similar Museum Street Methodist Church you will see the brick (this wall cannot be seen from the street). His full reply can be read in the Ipswich Society Oct 2021 Newsletter www.ipswichsociety.org.uk/newsletter/

RM

## Suffolk Coast and Heaths Work Party

Good News! SCH AONB Work Parties are back and the first at a geology site is on December 14th - GeoSuffolk will be there of course. Register with Suffolk Coast and Heaths AONB to take part. www.suffolkcoastandheaths.org/volunteering/volunteer-opportunities/work-parties/