

COPROLITE STREET - NOTES FROM AN EXHIBIT

at the Geologists Association Festival of Geology, University College
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THE SUFFOLK COPROLITE INDUSTRY

A look at an almost forgotten industry of Victorian Suffolk.

The element phosphorus is an essential ingredient of the bones of our skeleton (as calcium phosphate), and which we get from our food. But a field with no phosphate in the soil is incapable of producing grain, peas or beans.

'Coprolite' stones were discovered by a Clergyman Professor on holiday at Felixstowe, Suffolk, and their phosphate content was responsible for the local fertiliser industry. The 1840s were a time of shortage of phosphate manure and 'soluble' superphosphate from coprolite was a new and welcoming way to increase the food supply of England.

The industry lasted from about 1847 to 1895, superseded by phosphate from Cambridgeshire, France and South Carolina.

JOHN STEVENS HENSLAW

In the year 1843 John Stevens Henslow, Professor of Mineralogy and Professor of Botany in the University of Cambridge, and his family were staying for a few weeks at Felixstowe, Suffolk.

The eroding cliff had fallen masses strewn with vast quantities of nodules, analysis showing them to be rich in phosphate (about 25% P_2O_5 in modern times).

INITIALLY thought to be coprolite (fossil faeces), these nodules from the Suffolk Pleistocene age Red Crag were shown to be derived from London Clay. It was due to this that the word 'coprolite' became the commercial term for these phosphatic nodules. The phosphate mineral is francolite (carbonate fluorapatite); it is enriched by upwelling marine water before precipitation to form phosphate rock.

COPROLITE pits were usually 10-15 feet deep, and the coprolite bed, 1-2 feet thick, occurred at the base of the Red Crag. After excavation, sand was sieved and washed from the stones and flints, boxstones were picked out for use as building and road material, and fossil teeth for collectors. The phosphatic nodules were then carted to a manufactory where they were ground up then treated with sulphuric acid to make superphosphate.

COPROLITE FACTORY, IPSWICH

The former coprolite factory on the corner of Coprolite Street and Ipswich Dock

EDWARD PACKARD

Edward Packard and his firm owned many of the coprolite pits in Suffolk, a manufactory, and several sailing barges including 'Fossil' and 'Ammonite'.

THE rostral (snout) bone of a fossil whale, *Choneziphius packardii* from the 'coprolite' bed at the base of the Red Crag at Felixstowe, Suffolk. Named after Edward Packard, this is a large (40.44 cm long) solid bone. It is in Ipswich Museum.

BOXSTONES

These cobbles of sandstone have a phosphatic matrix and contain fossils of (probably) Late Miocene age, showing that there was a period of phosphatisation in Miocene times. They were called 'boxes' by people in coastal Suffolk, hence their name - 'Boxstones.'

THE COPROLITE WINDOW

In 1862 work began on restoration work at All Saints' Church, Walsringfield, Suffolk, using money from the coprolite industry in the parish. The East window was added which is one of the better examples of Victorian stained glass.

COPROLITE STREET, IPSWICH

We still have Coprolite Street in Ipswich, and it is now the address of University Campus Suffolk.

Do we have the only 'Fossil Animal Dropping Street' in the world?

Geologists come from far afield to have their photographs taken in it.

Long may it continue.