

Bulletin of the Geological Society of Norfolk

No. 31 (1979)

Published September 1979

CONTENTS

	Page
Funnell, B.M.	
Palaeoenvironmental analysis of the Dobb's Plantation Section, Crostwick (and comparison with type localities of the Norwich and Weybourne Crags).	1
Murphy, P. and Funnell, B.M.	
Preliminary Holocene stratigraphy of Brancaster Marshes.	11
Straw, A.	
Age and correlation of Pleistocene deposits in West Norfolk.	17
West, R.G.	
A frost crack system at Covehithe Cliff, Suffolk.	31
Funnell, B.M.	
History and prognosis of subsidence and sea-level change in the lower Yare Valley, Norfolk.	35
Gallois, R.W.	
The Kimmeridge Clay in Norfolk.	45
Funnell, B.M.	
Kimmeridge Crawl: Field trip to West Norfolk, (September, 1979).	69
Cambridge, P.G.	
Report on Field Meeting at Bramerton Common. (Summary account, 1978)	71
[Secretary's Report] - 1978.	[79]

The Geological Society of Norfolk exists to promote the study and understanding of geology in East Anglia, and holds meetings throughout the year.



Click here, to order printed copy of the Bulletin.
Please, specify the issue or year required.

Back copies of the Bulletin cost £3.50 each (members); £10.00 each (non-members).

For membership details consult our web site <http://www.norfolkgeology.co.uk>

ISSN0143-9286

**PALAEOENVIRONMENTAL ANALYSIS OF THE DOBB'S PLANTATION
SECTION, CROSTWICK (AND COMPARISON WITH TYPE LOCALITIES OF THE
NORWICH AND WEYBOURNE CRAGS)**

B.M. Funnell

School of Environmental Sciences,
University of East Anglia, Norwich, NR4 7TJ, UK.

INTRODUCTION

This section was excavated by the Geological Society of Norfolk and the Ipswich Geological Group in September 1977 (Cambridge, 1978^a), and a preliminary account of the section and the molluscs recovered was given by Cambridge, (1978^b). Foraminifera were examined from the same samples from which the molluscs were obtained. The results of the examination of the foraminifera are here combined with a re-assessment of the mollusc data in order to interpret the environment in which these shelly sands accumulated.

No formal abstract available for this paper.

Bull. geol. Soc. Norfolk (for 1979) **31**, 1-10.

Page 1 of 1

Website design and funding by:

UK Fossils www.ukfossils.co.uk and UKGE www.ukge.co.uk



www.norfolkgeology.co.uk

**PRELIMINARY HOLOCENE STRATIGRAPHY
OF BRANCASTER MARSHES**

*P. Murphy*¹ and *B.M. Funnell*²

¹ Centre of East Anglian Studies,
University of East Anglia, Norwich, NR4 7TJ, UK.

² School of Environmental Sciences,
University of East Anglia, Norwich, NR4 7TJ, UK.

INTRODUCTION

Although the accretional coastal environment of North Norfolk has long been the subject of study by naturalists and physical geographers (Steers, 1960), no serious attempt ever seems to have been made to determine the stratigraphy of the Holocene intertidal sediment prism. Mainly in the hope of learning something of past conditions seaward of the Roman fort at Brancaster 13 Hiller auger holes were sunk in the summer of 1978 and repeated one of these to a depth of 8 m with a Minuteman auger in September 1978. An interpretation of the section revealed is made and samples recovered from the Hiller auger holes presented, having been examined for molluscs, foraminifers and plant macrofossils.

No formal abstract available for this paper.
Bull. geol. Soc. Norfolk (for 1979) **31**, 11-16.

Page 1 of 1

Website design and funding by:
UK Fossils www.ukfossils.co.uk and UKGE www.ukge.co.uk


www.norfolkgeology.co.uk

**AGE AND CORRELATION OF PLEISTOCENE
DEPOSITS IN WEST NORFOLK**

A. Straw

Department of Geography,
University of Exeter, Amory Building, Rennes Drive, Exeter, EX4 4RJ UK.

ABSTRACT

Previous workers have described two types of older glacial till in west Norfolk, differentiated in composition and colour, and by the nature of their contacts in section. Gallois, (1978) showed that at low levels the tills survive along valley lines. This situation is compared with that in south-west Lincolnshire, west of the Fens. Further comparison with central and east Lincolnshire situations supports a case that the two tills were emplaced contemporaneously by two confluent ice sheets. A Wolstonian age for the tills is argued on several grounds, and the former correlation of the darker 'Jurassic' till of west Norfolk with the Anglian Lowestoft Till is rebutted. Various non-glacial Pleistocene deposits, including the Nar Valley Beds, are examined as probable Ipswichian or Early Devensian sediments, together with implications regarding sea-levels about the close of the Ipswichian stage.



A FROST CRACK SYSTEM AT COVEHITHE CLIFF

R.G. West

Sub-department of Quaternary Research, Botany School,
University of Cambridge, Downing Street, Cambridge, CB2 3EA, UK.

INTRODUCTION

The cliff at Covehithe (G.R. TM 529 820) has in the last few years been subject to rapid erosion. In March 1978 the cliff sections so exposed revealed a system of frost cracks penetrating the sands and gravels of the Westleton Beds (Hey, 1967). Eight such cracks were seen. Their disposition in relation to the road ending at Covehithe Cliff sketches the stratigraphy at each frost crack site. The cliff section is composed of a number of sedimentary units (Section in Figure 48, West, 1980). At the base are the laminated clays of the Baventian stage, which often form a ledge to seaward of the cliff. These have been described recently by West, Funnell and Norton, (1979). A thin bed of red loamy sand, up to 60 cm thick and shelly in places, overlies the Baventian clays unconformably. This sand is overlain by up to 3.5 m of intertidal laminated beds of clay, silt and sand, showing bioturbation. The Westleton Beds sands and gravels, up to 5 m thick, lie unconformably on these intertidal sediments. Above them, thickening south of the road, is a series of sands with minor associated gravels, up to 5 m thick, with a pebble content described by Hey, (1967). This unit is sealed by a reddish loamy sand up to 1.5 m thick and the modern soil.

No formal abstract available for this paper.

Bull. geol. Soc. Norfolk (for 1979) **31**, 31-34.

Page 1 of 1

Website design and funding by:

UK Fossils www.ukfossils.co.uk and UKGE www.ukge.co.uk

 www.norfolkgeology.co.uk

**HISTORY AND PROGNOSIS OF SUBSIDENCE
AND SEA-LEVEL CHANGE IN THE LOWER
YARE VALLEY, NORFOLK**

B.M. Funnell

School of Environmental Sciences,
University of East Anglia, Norwich, NR4 7TJ, UK.

ABSTRACT

A model of subsidence and sea-level change in the lower Yare Valley is proposed, based on the levels of successive freshwater and estuarine deposits over the last 8000 years. A projection of relative land-sea changes for the next 2000 years is made on the basis of continuing subsidence at the rate of 1.5 m per 1000 years, and continuing sea-level fluctuations of an amplitude of about 1.5 m wavelength of about 1000 years.



THE KIMMERIDGE CLAY IN NORFOLK

R. W. Gallois

Institute of Geological Sciences,
Geological Museum, Exhibition Road, London, SW7 2DE, UK.

INTRODUCTION

The Kimmeridge Clay was first recognised as a separate formation by William Smith on his 'Improved Table of Strata' (1815~6) where he called it the Oaktree Clay. Webster (in Englefield, 1816) subsequently used the term Kimmeridge Clay for the same beds, taking the name from the village on the Dorset coast where there are fine cliff sections. The formation has an extensive outcrop and subcrop in England. The outcrop runs in an almost continuous strip from Dorset to North Yorkshire and is broken only in north Dorset, Wiltshire, between Buckinghamshire and Cambridgeshire and across the Market Weighton axis in Humberside / North Yorkshire, where the formation has been removed by erosion during the late Jurassic and Lower Cretaceous. The subcrop underlies the whole of the land area to the east of the outcrop with the exception of a large area beneath East Anglia (on the London Platform) and a smaller area on the Market Weighton Axis.

Throughout much of its outcrop the Kimmeridge Clay is largely obscured by drift deposits or weathered material and for this reason most of the important contributions to its stratigraphy have been made from studies of the Dorset cliff sections.

No formal abstract available for this paper.

Bull. geol. Soc. Norfolk (for 1979) **31**, 45-68.

Page 1 of 1

Website design and funding by:

UK Fossils www.ukfossils.co.uk and UKGE www.ukge.co.uk

 www.norfolkgeology.co.uk

**KIMMERIDGE CRAWL: FIELD TRIP TO WEST NORFOLK,
9TH SEPTEMBER 1979**

B.M. Funnell

School of Environmental Sciences,
University of East Anglia, Norwich, NR4 7TJ, UK.

SUMMARY

Meeting at Denver Sluice for a day of collecting and clambering over Kimmeridge Clay exposures. Starting in earnest near Southery pumping station (TL 612 932) where fresh spoil, including Kimmeridge Clay, had recently been taken from the Southery Main Drain longside Sedge Fen road. Vertebrae, bivalves, oil shale and pieces of "beef" were found. More oil shale was found freshly excavated at the west side of the White Bridge (TL 616 944).

Beside Downham bridge (TF 601 033), large cementstone doggers of Bed 44 in the Upper Kimmeridge Clay could be seen in the east bank of the Relief Channel immediately north of the bridge. Mr. J.E. Clarke, Clerk to the Southery Internal Drainage Board then took us to see new excavations at Stow pumping station (TL 598 057) where some really oily shale had been brought to the surface with some large ammonite specimens.. There were also some interesting blocks showing patches of the brilliant blue mineral vivianite. More ammonites, an occasional vertebra, and good septarian nodules and cone-in-cone structure were found on the spoil from the freshly excavated 16 foot Drain nearby (extending towards TL 595 055). Continuing to Stowbridge, ammonites were obtained from the more cohesive blocks on the west bank just south of the bridge over the relief channel at (TF 605 070).

No formal abstract available for this paper. (Summary account of field trip, 1979)

Bull. geol. Soc. Norfolk (for 1979) **31**, 69-70.

Page 1 of 1

Website design and funding by:

UK Fossils www.ukfossils.co.uk and UKGE www.ukge.co.uk

 www.norfolkgeology.co.uk

**REPORT ON FIELD MEETING
AT BRAMERTON COMMON 3RD SEPTEMBER 1978**

P.G. Cambridge

258 Bluebell Road,
Norwich, NR4 7LW, UK.

SUMMARY

The Norwich Crag at Bramerton has attracted a great deal of attention since the earliest days on account of the rich fauna of molluscs, fishes and mammals, and in recent years the foraminifers and pollen. It was visited by the great William Smith and specimens from this area were illustrated in Sowerby's "Mineral Conchology". At the present day remains of two old pits can be traced, Blake's Pit (TG 298 060) to the east and the Common Pit (TG 295 060) to the west. Traces of shelly material were seen in house foundations as far as the "Wood's End". To the west of this the Crag beds appear to have been cut out by Glacial or post-Glacial beds, as shown in the gas pipeline trench, a few hundred yards to the west. This trench was cut from river level to the top of the hill with no trace of Crag. Beds with a similar fauna to that at Bramerton occurred in excavations for the new sewage plant at Whitlingham but on examination were seen to be redeposited material and no Crag was seen in situ, so the disturbance of the Crag beds continues at least as far as the sewage plant. A little further to the west the Crag is again seen in the Great Pit, close to the bend in the river at Whitlingham, and here the surface of the Chalk is much higher and the shelly sands reduced in thickness. On the other side of the river, an old pit at Postwick Grove exposes some Chalk, and Crag shells are thrown out by rabbits. Some Crag was visible in 1951 but the pit is now much overgrown and infilled. However, examination of shells from a disturbed slope showed a fauna similar to that at Bramerton.

No formal abstract available for this paper. (Summary account of field trip, 1978)

Bull. geol. Soc. Norfolk (for 1979) **31**, 71-77.

Page 1 of 1

Website design and funding by:

UK Fossils www.ukfossils.co.uk and UKGE www.ukge.co.uk

 www.norfolkgeology.co.uk