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THE LATE JURASSIC TO MID CRETACEOUS ROCKS OF NORFOLK

R.W. Gallois

British Geological Survey, 30 Pennsylvania Road, Exeter, EX4 6BX, UK.

INTRODUCTION

The Upper Jurassic and Lower Cretaceous rocks of Norfolk crop out in a strip of low-lying ground 20 to 40 km in width running through the western part of the county from Hunstanton to the River Little Ouse, a distance of about 60 km. They are composed almost entirely of soft mudstones and loose sands and are deeply weathered at outcrop; there is only one natural exposure (Hunstanton cliffs) in the area. Much of the outcrop is concealed beneath the thick Holocene deposits of Fenland and The Wash or beneath Pleistocene deposits. However, the structure of the area is simple and this has enabled the stratigraphy to be worked out in recent years by means of field surveys and the examination of temporary sections and continuously cored boreholes. The sequence falls naturally into three parts - the almost wholly argillaceous Upper Jurassic Kimmeridge Clay and Lower Cretaceous Gault separated by the predominantly arenaceous top Jurassic-Lower Cretaceous Sandringham Sands, Dersingham Beds, Roach and Carstone.

The Kimmeridge Clay of Norfolk is composed of shelly mudstones with a rich fauna. Variations in the local stratigraphy, the mineralogy of the formation and its lithological and faunal associations suggest that it was deposited on a broad marine shelf, in warm, relatively shallow, quiet water, close to a land area (the London Platform).

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A GUIDE TO THE GEOLOGY OF SOUTH-EAST SUFFOLK

S.J. Mathers, J.A. Zalasiewicz and P.S. Balson

British Geological Survey, Nicker Hill, Keyworth, Nottingham, NG12 5GG, UK.

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THE GLACIAL GEOLOGY OF NORFOLK

G.S. Boulton¹, F. Cox², J. Hart¹ and M. Thornton²

¹ School of Environmental Sciences, University of East Anglia, Norwich, NR4 7TJ, UK. ² British Geological Survey, Nicker Hill, Keyworth, Nottingham, NG12 5GG, UK.

INTRODUCTION

The ice age in Norfolk left a legacy of varied and spectacular geology, but because of the richness of the evidence Norfolk not only rakes a major contribution to our knowledge of Ice Age Britain but it also generates many enigmas. For instance the magnificent exposures in the north-eastern coastal cliffs have tempted us to develop a more sophisticated stratigraphy than in many other poorly exposed areas where the evidence which might invalidate our generalisations is conveniently hidden. Thus, rather than attempt to elucidate many of the controversial details of stratigraphical correlation we have tried to sketch the broad and most obvious outlines of Norfolk's glacial geology.

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A GUIDE TO THE HOLOCENE GEOLOGY OF NORTH NORFOLK

B.M. Funnell¹ and I. Pearson²

¹ School of Environmental Sciences, University of East Anglia, Norwich, NR4 7TJ, UK. ² Department of Earth Sciences, Open University, Walton Hall, Milton Keynes, MK7 6AA, UK.

ABSTRACT

Fourteen different sedimentary / faunal / floral environments have been recognised in the Holocene inter- and supra-tidal deposits of the North Norfolk coast, on the basis of aerial photographic survey and ground sampling.

Sedimentological and micropalaeontological characterisation of these surface sediments has allowed their recognition in borehole samples taken across the coastal zone in a series of N~S transects.

Sedimentation commenced around 8500 bp. with the accumulation of freshwater peats, which were progressively inundated from 6000 bp. onwards by marine waters that deposited extensive accumulations of inter-tidal silty sands and muds. In places there is clear evidence of marine regression / marsh emergence leading exceptionally to pine woodland growth at about 3000 bp., but generally the positions of major channels, tidal flats and marshes seem to have been stabilised in their present locations for at least 4000 years, either by the forming of barrier beaches, once they topped the high-tide mark, or by the influence of the underlying pre-Holocene topography.

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