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THE SUB-MESOZOIC FLOOR IN NORFOLK

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INTRODUCTION

The general features of the sub-Mesozoic floor in Eastern England are well known. In East Anglia the floor forms part of the London-Brabant Massif and comes to within 150m of the surface. The overlying Mesozoic rocks are thin compared to Lincolnshire and to southern England, and it appears that the Massif has been a relatively stable area since the late Devonian.

Various aspects of the geology of the floor have been discussed by a number of authors. Bullard et al., (1946) conducted seismic refraction measurements around Cambridge and reviewed the available borehole data in the East Anglian region. A contour map of the sub-Permian floor was included in Kent, (1949), and in a later paper, Kent reviewed the general geology of the sub-Mesozoic floor in Eastern England (Kent, 1968). An account of the Caledonian igneous rocks in Central and Eastern England has been given by Le Bas, (1972). Recently, an important contribution has been the production of a map of the sub-Mesozoic (strictly sub-Upper Permian) geology in southern Britain by Professor Wills, (1973).

In these and other papers, however, information on the geology of the sub-Mesozoic floor of the northern part of East Anglia is scant, and it is the purpose of this short article to review additional information now available. The results of deep boreholes and geophysical surveys are described, and, as any proper attempt at understanding the floor in Norfolk must take account of information from a much wider area, data from outside Norfolk is included.

No formal abstract available for this paper.

Bull. geol. Soc. Norfolk (for 1975) **27**, 3-19.

THE BASE OF THE CARSTONE AT HUNSTANTON – PART II

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INTRODUCTION

Following the successful excavations to examine the base of the Carstone made at Hunstanton beach on 22nd October 1972 (Gallois, 1973), a second field excursion and series of excavations was organised by Mr. Hamon Le Strange on 17th June 1973 to try to provide details of those parts of the Barremian - Albian sequence that were still in doubt.

Prior to the digging of the first excavation the nature of the base of the Carstone was thought to be relatively simple. The Carstone (probably Lower Albian in age) was thought to rest within marked unconformity, and with striking lithological change, on the Snettisham Clay (Lower Barremian), with a nodule bed at the base of the Carstone containing derived Lower Greensand (Lower Aptian) phosphatized ammonites. Much rarer blocks of very fossiliferous sandy phosphatic ironstone of Barremian age were also known from Hunstanton beach and were thought to occur in the same nodule testifying to the former presence in Norfolk of a much thicker pre-Carstone Cretaceous sequence than can now been seen.

No formal abstract available for this paper.

Bull. geol. Soc. Norfolk (for 1975) **27**, 21-27.

A BARREMIAN FAUNA FROM EXCAVATIONS AT HUNSTANTON BEACH

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INTRODUCTION

The fauna from some sandy phosphatic ironstone nodules, (Gallois, 1975), obtained from excavations at Hunstanton beach, is described. The fossils are preserved largely in the form of external moulds and steinkerns, with some original shell material present. Much of the material is fairly well preserved, although in some cases replacement of the shell has resulted in the loss of ornament on the exterior shell moulds.

The fauna is varied and includes brachiopods, scaphopods, gastropods, bivalves, and ammonites the bivalves being by far the most abundant, both in number and variety. Wood fragments are also common. The specimens recorded have been registered in the Institute of Geological Sciences Collections under No. ZR 9731~9770.

No formal abstract available for this paper.
Bull. geol. Soc. Norfolk (for 1975) **27**, 29-32.

REPORT ON FIELD MEETINGS TO BRAMERTON, NEAR NORWICH 14TH~15TH SEPTEMBER 1974

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SUMMARY

Taking place over two days, the object being of the meeting to excavate an important geological site. Blake's Pit, Bramerton, (TG 301 063) chosen for several reasons, not the least of which easy of excavation. The intention being to produce a measurable section which would remain accessible for some time, and above all to expose the base of the section. The Crag at this point is known to rest on Chalk, but the exact height above river level and the precise zone of the Chalk were unknown. It was assumed that this was the Scrobicularia Pit of early authors, but since this species was not found in the exposed upper beds in the pit, there was some doubt. Samples of the Chalk were collected, but no fossils were found to establish the age of the Chalk at this point.

No formal abstract available for this paper. (Summary account of field trip, 1974).
Bull. geol. Soc. Norfolk (for 1971) **20**, 33-46.

FOSSIL ICE-WEDGE POLYGONS AT CORTON, SUFFOLK

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INTRODUCTION

In January 1971 a scour at Corton Cliffs re-exposed the Cromer Forest Bed Series in the upper part of the beach. The section here is well known through the cliff-section and description of J.H. Blake, (1884, 1890), but exposures have been rare since then, and indeed are unlikely to occur again, as the recently built sea defences have led to a permanent build-up of the beach.

The sequence at the cliff-base is as follows:

Brown boulder clay (Lower Boulder Clay, North Sea Drift, Norwich Brickearth)

Cromer Forest Bed Series{
Laminated grey silt and sand up to 2 m thickness.
Wood peat and coarse detritus mud up to 0.25 m thickness.
Grey-blue clay (Rootlet Bed).

The Rootlet Bed is a marsh clay, and the wood peat and detritus mud reflect a higher fresh-water level with rich organic deposition. A marine transgression followed, depositing inorganic tidal sediments. Finally the area was overrun with the ice which deposited the boulder clay. The palaeontological content of the Forest Bed Series at Corton indicates a correlation of the three horizons to a period within the Cromerian temperate stage.

The scour in 1971 revealed a plan view of ice-wedge casts.

No formal abstract available for this paper.

Bull. geol. Soc. Norfolk (for 1975) **27**, 47-53.

THE CONTORTED DRIFT OF NORTH NORFOLK

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INTRODUCTION

The contorted Drift is best developed and exposed in coastal cliffs between Mundesley and Weybourne. The complex fold and thrust-raft structures found there in the glacial and glacifluvial deposites have been generally attributed to deformation by ice (Reid, 1882; Slater, 1926; Dhonau & Dhonau, 1963 and Banham, 1968).

Much evidence from mapping, petrological and mineralogical studies now supports the conclusion that the Contorted Drift lithologically, consists entirely of three Cromer Tills, together with the interbedded Intermediate Beds and Mundesley Sands and the overlying Gimingham Sands and Brick Kiln Dale / Briton's Lane Gravels (Banham, 1968). In general, deformation of this sequence increases from SE to NW.

No formal abstract available for this paper.

Bull. geol. Soc. Norfolk (for 1975) **27**, 55-60.

THE TWO-TILL PROBLEM IN WEST NORFOLK

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SUMMARY

Two superimposed tills have been exposed at Bawsey, Hillington, North Runcton and in the Nar Valley. The last three sites were only temporarily exposed and the Bawsey site is therefore regarded as the 'type' locality. In each case the junction between the tills is sharp, and no evidence for an erosion surface or palaeosol has been recorded.

No formal abstract available for this paper. (Presidential address, 1974)
Bull. geol. Soc. Norfolk (for 1975) **27**, 61-75.