

# Bulletin of the Geological Society of Norfolk

No. 20 (1971)

Published September 1971

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## THE ORIGIN OF THE NORTH SEA

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### # INTRODUCTION

*The North Sea is a shallow epicontinental sea bordering the North Atlantic ocean, with which it connects broadly to the north, and narrowly to the south via the Straits of Dover. Over most of its southern half it is less than 50 m deep, and even in its northern part does not generally exceed 200 m in depth.*

*The North Sea occupies a structural basin known as the North Sea Basin, which has existed in some form or other, and contained shallow seas of one form or another, for some 270 million years, i.e. from the Permian period onwards. During this time nearly 5,000 m of sediment have accumulated in places in the Basin, compared with which the depth of the present sea is insignificant. At no time has the depth of water in the North Sea Basin approached 5000 m. Therefore, the history of the Basin has clearly been one of progressive subsidence, leading to occupation by a succession of shallow seas of different types, culminating in the North Sea of the present-day. In the following account the origin of the North Sea is traced from the inception of the structural basin at the end of the Carboniferous (270 my BP) to the definition of more or less the present form of the North Sea at the beginning of the Tertiary (65 my BP).*

# No formal abstract available for this paper. (Presidential Address, 1969)

Bull. geol. Soc. Norfolk (for 1971) **20**, 2-16.

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## ASPECTS OF GEOLOGY IN EDUCATION

*H. Evans*

Norfolk College of Arts and Technology,  
Tennyson Avenue, Kings Lynn, PE30 2QW, UK.

### # INTRODUCTION

*All subjects within the curriculum have a limited vocational factor relative to the supply and demand of society. Geologists have been aware of such a situation for many years, and it is one which has now affected other natural sciences. It is a personal opinion that this has resulted in conservative elements within geology neither actively encouraging nor discouraging the teaching of the subject in schools. This is, in effect, a restrictive practice based on vocational considerations. The result has been to limit the degree of educational research into geology as a discipline of value within the school curriculum.*

# No formal abstract available for this paper.  
Bull. geol. Soc. Norfolk (for 1971) **20**, 17-25.

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**THE ZONES OF THE GIPPING VALLEY CHALK, SUFFOLK**

**R.A.D. Markham**

Ipswich Museum,  
High Street, Ipswich, IP1 3QH, UK.

**# INTRODUCTION**

*Jukes-Browne, (1903) referred the Gipping Valley Chalk to the zone of **Actinocamax quadratus** and Boswell, (1912) recorded the overlying **Belemnitella mucronata** zone from Bramford. The **quadratus** zone of the Gipping Valley was called the zone of granulated **Actinocamax** by Brydone, (1932), as the old zone of **A. quadratus** in the south of England had by then been divided into a lower zone of **Offaster pilula** and an upper zone of **Actinocamax quadratus** (restricted). Gaster, (1941) referred the chalk below the **mucronata** zone in the Gipping Valley to the zone of **O. pilula**, concluding that the **A. quadratus** zone (restricted) was missing.*

*Until more detailed studies are made, the Gipping Valley Chalk may for practical work be divided:*

- 5 - Division of **Goniot euthis quadrata***
- 4 - Division of **Belemnitella***
- 3 - Division of **Goniot euthis** and **Echinocorys***
- 2 - Division of **Goniot euthis** (**Inoceramus** and **Ostrea** also common)*
- 1 - Division of **Goniot euthis** and **Marspites***

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## A FOREST BED HORSE JAW FROM PASTON, NORFOLK

*R.A.D. Markham*

Ipswich Museum,  
High Street, Ipswich, IP1 3QH, UK.

### # INTRODUCTION

*In the collection of Dr. W.H. Miller of Mundesley, is a fine mandible of a horse, found on the beach at Paston; the state of preservation and adhering matrix leave little doubt as to derivation from nearby Forest Bed deposit.*

# No formal abstract available for this paper.  
Bull. geol. Soc. Norfolk (for 1971) **20**, 29-31.

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**REPORT ON FIELD MEETINGS TO WANGFORD,  
AND EAST SUFFOLK**

*P.G. Cambridge*

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Norwich, NR4 7LW, UK.

**# SUMMARY**

*Visits to representative sections of most of the East Anglian Crag.*

*Hill Farm, Vangford (TM 462 777), In 1969 a section was re-excavated in an old pit showing shelly Norwich Crag of littoral type, passing up into bedded gravels.*

*Crag Farm, Sudbourne (TM 429 523), observations on calcitic fossils and aragonite fossil moulds in the partially decalcified Coralline Crag rock bed.*

*Visits to Church Pit, Chillesford (TM 383 523), Natural Farm Pit, Butley (TM 371 511), ending on discussion of the lithology and biogenic activity noted at the sand and gravel workings Waldringfield Heath (TM 263 448).*

# No formal abstract available for this paper. (Summary accounts of field trips, 1971)

Bull. geol. Soc. Norfolk (for 1971) **20**, 34-36.

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