## **Bulletin of the Geological Society of Norfolk**

## No. 70 (2020-21)

## **Published July 2020**

CONTENTS	
	Page
Editorial	1
Obituary: Charles Robin Stevenson (1942-2019)	4
Stephenson, C.R. and Giles, L.	
Ballast and rubble in the Marshland Churches of West Norfolk.	7
Stephenson, C.R. and Giles, L. (with contributions by Andrews, J.E.)	
Glacial sediments of New Pit, Blackborough End: Wolstonian	31
pro-glacial lake 'overflow' deposits?	
Donovan, S.K, Hoeksema, B.W., Fransen, C.H.J.M., Vonk R.	
and Adema, J.P.H.M. Unusual preservation of North Sea shells:	
Scheveningen, the Netherlands	55
Bourke, W.J., Marca, A., Andrews, J.E. and Bourke, A.F.G.	
Scientific note on a large gastropod (Pleurotomariidae) from Upper	67
Cretaceous Chalk at Overstrand, Norfolk, UK.	

Back issues of the Bulletin are free online in the Biodiversity Heritage Library https://www.biodiversitylibrary.org/bibliography/166261#/summary



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

Print 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

## Obituary Charles Robin Stevenson (1942-2019)

Robin Stevenson was well-known to members of the GSN. He was a member from at least the early 1980s and a great enthusiast for promoting the geology of west Norfolk in particular. Robin was born in Aberdeen. His father worked in shipping and consequently as a child Robin lived in a number of great maritime cities including Glasgow, Falmouth, Belfast and Genoa. The family finally settled in Twickenham and after leaving school Robin studied 'A' levels at the Kingston Technical Institute, staying there to complete a degree in geology. At that time the institute was considered a Regional College of Technology (now the University of Kingston). Although he stayed at Kingston to do research for three further years he discovered his vocation while teaching 'O' and 'A' level at a local further education college.

He moved to teach at a further education college in Sunderland where he met Wendy, soon to be his wife. At this time he began to develop an interest in mosses which deepened with his move to King's Lynn, where Richard Libby introduced him to the Cambridge bryology group. In King's Lynn he taught geology at Norfolk College of Arts and Technology (latterly the College of West Anglia) where he rapidly developed a reputation as an inspirational teacher. He took early retirement in 2002.

Robin was prominent in the West Norfolk group of the GSN, active in the late 1970s and early 1980s. GSN newsletter No. 6 records that he gave a lecture in December 1980 with Andrew England on 'Glaciation in NW Norfolk' organised by the West Norfolk Natural History Society. He also ran a three-year WEA tutorial class in geology between 1981-4. His first written geological contribution seems to have been an article in the GSN Newsletter No. 11 (see publication list below) where he was considering the origin of exotic clasts in the ancient walls of King's Lynn; a subject that still fascinated him in 2019.

## BALLAST AND RUBBLE IN THE MARSHLAND CHURCHES OF WEST NORFOLK

C. Robin Stevenson\* and Ljuba Giles<sup>1</sup>

\* deceased

<sup>1</sup>42, Gayton Road, King's Lynn, Norfolk PE30 4EL.

email: ljuba.g@talktalk.net

#### ABSTRACT

The use of ships' ballast as a medieval building material in the northern Fens (Marshland Hundred) and the King's Lynn area is largely confined to coastal churches or those adjacent to navigable rivers or their former courses. The ballast materials occur in the rubble component of buildings and were examined on unrendered walls or where render had spalled, exposing the rubble beneath. Some ballast was clearly of local origin while other materials originated further afield. We present an inventory of the local and exotic lithologies identified and also offer a key for helping distinguish cargo ballast from weight ballast.

Bull. geol Soc. Norfolk (2020), 70, 7-30.

Website design and funding by:

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



## GLACIAL SEDIMENTS OF NEW PIT, BLACKBOROUGH END: WOLSTONIAN PRO-GLACIAL LAKE 'OVERFLOW' DEPOSITS?

C. Robin Stevenson\* and Ljuba Giles<sup>1</sup>

(with contributions by Julian E. Andrews<sup>2</sup>)

\* deceased

<sup>1</sup>42, Gayton Road, King's Lynn, Norfolk PE30 4EL.

<sup>2</sup>School of Environmental Sciences, University of East Anglia, Norwich NR4 7TJ

email: ljuba.g@talktalk.net

#### ABSTRACT

We describe glacio-fluvial sediments exposed between 1997 and 2002 in the 'New Pit' of the Sid George Quarry at Blackborough End (NW Norfolk) on the northern flank of the Nar Valley. We suggest a small receptor basin formed by retrogressive thaw slumping in unconsolidated Lower Cretaceous sands. Sedimentation in this basin occurred during overspill from a Nar Valley proglacial lake that cut overflow channels at ~35 mOD in the basin margin bedrock. The overflows deposited a suite of localised and channelized, Lithofacies Association A, proximal clastic sediments with currents flowing NW. Sand laden water then spread out from proximal areas into the basin depositing finer-grained Lithofacies Association B sands. The presence of sand wedges <u>within</u> this sedimentary sequence show that the basin-fill dried out periodically; other periglacial features attest to seasonal freezing or permafrost conditions. It is not possible to be certain about the age of these sediments without dating evidence. The elevation of these deposits suggests a Wolstonian age, consistent regional-scale mapping of lacustrine Wolstonian fan-deltas to the south.. If the sediments are of Wolstonian Age then the associated within-sequence periglacial features are probably of similar age.

Bull. geol Soc. Norfolk (2020), 70, 31-54.

Website design and funding by:

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

# UNUSUAL PRESERVATION OF NORTH SEA SHELLS: SCHEVENINGEN, THE NETHERLANDS

# Stephen K. Donovan<sup>1\*</sup>, Bert W. Hoeksema, Charles H.J.M. Fransen, Ronald Vonk and J.P.H.M. (Hans) Adema

Taxonomy and Systematics Group, Naturalis Biodiversity Center, Postbus 9517, 2300 RA Leiden, the Netherlands

<sup>1</sup>c/o Apartment 5, Worsley Point, 251 Worsley Road, Swinton, Manchester M27 0YE, UK. \*email: <u>SKennethDono@gmail.com</u>

#### ABSTRACT

The Recent, dead and empty mollusc shells that are so common on the North Sea coast of the Netherlands are a valuable resource as analogues for palaeoecological and taphonomic research. Three specimens collected from a beach at Scheveningen, Den Haag (The Hague), are each notable and distinct. An articulated shell of a common mussel, Mytilus edulis Linnaeus, in 'butterfly' preservation, has been overgrown and stabilized by an oyster, Ostrea edulis Linnaeus. The mussel's ligament must have held the valves juxtaposed after the soft tissues were lost and before the oyster grew over the valves. Encrustation by the oyster was thus faster than the time it took the ligament to rot. The second specimen is a cockle shell, Cerastoderma edule (Linnaeus), still articulated at the ligament when collected. The shell is encrusted both externally and internally by the balanid <u>Balanus crenatus</u> Brugière. The shell shows evidence of encrustation on all surfaces, a similar pattern of infestation to some North Sea razor shells. Another <u>C. edule</u> shell still has the valves in their life positions, because an oyster, Ostrea edulis, has overgrown the commissure and is cemented to both valves of the cockle. This infaunal cockle must have been partly exposed at the sediment surface in order to be encrusted by the epifaunal oyster. Presumably the cockle was moribund or dead for the oyster to successfully span the commissure. If any of these specimens had been found as a fossil, they would have posed interesting questions and prompted speculation that our modern examples help inform.

Bull. geol Soc. Norfolk (2020), 70, 55-65.

Website design and funding by:

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

## SCIENTIFIC NOTE ON A LARGE GASTROPOD (PLEUROTOMARIIDAE) FROM UPPER CRETACEOUS CHALK AT OVERSTRAND, NORFOLK, UK.

William J. Bourke<sup>1</sup>, Alina Marca<sup>2</sup>, Julian E. Andrews<sup>2</sup> and Andrew F.G. Bourke<sup>1</sup>
<sup>1</sup>468 Earlham Road, Norwich, NR4 7HP.
<sup>2</sup>School of Environmental Sciences, University of East Anglia, Norwich, NR4 7TJ.
e-mail: <u>a.bourke@uea.ac.uk</u>

### ABSTRACT

We report a specimen of a large gastropod (Mollusca, Gastropoda) preserved as an internal mould in chalk at Overstrand, Norfolk. Stable isotope stratigraphy supports a Lower Maastrichtian age for the specimen. Identified as a member of the family Pleurotomariidae, tentatively Conotomaria sp., this specimen is a rare occurrence of a large pleurotomariid gastropod and potentially the genus Conotomaria in the Upper Cretaceous Chalk of the UK.

Bull. geol Soc. Norfolk (2020), 70, 67-71.

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

