

**IPSWICH GEOLOGICAL GROUP
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CONTENTS

R. Markham.	Notes on some Red Crag Exposures.	Pages 2 - 4
R. M.	Bibliography: the printed Bulletin of the Geological Society of Norfolk. Nos.19-27. (1971-1975)	Pages 5, 6
R. Markham	The Tattingstone Digs: Preliminary Notes.	Pages 6 - 8

NOTES ON SOME RED CRAG EXPOSURES.

GREAT BEALINGS (Cherry Tree Farm)

The section shows about 9ft 2in. pale yellow sand with small scale cross-bedding and thin ferruginous clay layers, resting on about 3ft.8in. of shelly Red Crag, from which the following fossils have been seen;-

Bivalves

Anomia
Chlamys opercularis
Mya
Spisula
Cardium
Mytilus
Corbula
Pholad
? Macoma
Pteromeris corbis

Gastropods

Nucella lapillus
Littorina
Turritella incrassata
? Neptunea (dextral)

Barnacle plates

Corals

Balanophyllia

I wish to thank Mr. G. L. Ransome for bringing the site to my attention, and Mr. D. C. Smith for permission to visit it.

FOXHALL (Felixstowe U.D.C. Refuse-Tipping Site.)

This is the site of a pit dug in the mid-1960s., showing Sand and Gravel overlying Red Crag.

The upper part of the Red Crag consisted of about 11ft, in places more, of ferruginous, coarse, pebbly sands; at the base was a thin pebbly bed, sometimes cemented with ironstone, and in places consisting of a bed of moulds of Artica islandica, with some, phosphatic nodules at the bottom.

The lower part of the Red Crag was cross-bedded, the top 2-2½ ft being non-shelly (decalcified) with 2½-3 ft of shelly crag below. The dip of the cross-bedding was about 20 degrees to the west.

BENTLEY (field-surface, north-east of level crossing)

The following Red Crag shells have been found after ploughing;-

Bivalves

Glycymeris
Ostrea
Chlamys harmeri
Chlamys opercularis
Cardium edule
Cardium parkinsoni
Cardium 'interruptum' group
Venus casina
"Tapes"
Dositia exoleta

(continued below)

Gastropods

Neptunia contraria
Nucella tetragona
Nucella lapillus/incrassata ?
Turritella incrassata
Searlsia costifera
Nassa reticosa
Liomesus dalei
Natica multipunctata
"Natica" (Polinioos?),
Trivia coccinelloides

(continued below)

(Bentley - Bivalves continued from above)

- Astarte obliquata
- Astarte omalii
- Astarte ? basteroti
- Astarte sp.
- Mytilus ?
- Anomia ?
- Spisula glauca
- Spisula arcuata ?
- Cyclocardia
- Panopaea

(Bentley - Gastropods continued from above)

- Trivia sp. (large)
- Trivia sp.
- Scaphella lamberti
- Calliostoma (fragment)

Corals

- Balanophylla calycula
- Sphenotrochus

BATTISFORD

(see I. G. G. Bulletin no.3, 1967, pp. 1-4, see section and faunal list).

In 1967, 3ft. 4in. of shelly pebbly gravel were known; Geology Group 'digs' since then have increased this to 5ft.10in.,but the Chalk has still not (end of 1974) been struck.

A few additional fossils may be recorded from the Red Crag here;-

Gastropods

- Nucella tetragona
- Natica multipunctata
- Sipho (*information from Dr. M. Ware*)
- Searlsia costifer

Fish

- Vertebrae (small) (*from Dr. Ware*)
- Edaphodon tooth fragment (*with Somersham Youth Club*)

Annelid

Mineralised wood (*with Somersham Y. C.*)

(small tubes) (*from Dr. Ware*)

TRIMLEY — The southern relief road to the Trimley by-pass.

The method of digging the cutting gave very few clear vertical sections, but two seen and measured showed Red Crag on London Clay.

Trench for gas pipe a short distance south of the railway bridge, east side of road ;-

Stony shelly crag	Circa 1½ft thick
Laminated silts, with sandy laminations in upper part and shelly patches, especially in lower part	Circa 12½ft thick
----- junction obscured -----	-----
London Clay	-

Section immediately north of railway bridge, east side of road;-

Coarse red sand	2ft.6in. thick
Shelly crag and sand bands	3ft.9in. thick
Laminated Beds (occasional sandy beds, shelly in lower part)	10ft.10in. thick
Red shelly Crag, with 4in. Phosphatic Nodule Bed at base.	1ft.6in. thick
Blue London Clay	Circa 6ft. seen.

(TRIMLEY, cont.)

The laminated beds are an unusual facies of the Red Crag, but something similar was noted not far away In the Felixstowe railway cuttings, see "The Geology of the Country around Ipswich, Hadleigh and Felixstow,"1885 (Geol. Surv. Mem.), p.54, where it says "Farther on there is evenly bedded fine sand, with clay-partings (very different from the usual course false bedded sand) nearly to the bottom, with shelly crag below, and also above (nearly to the top); so that this finer bed In clearly in the shelly Crag and not above it (like the Chillesford Beds)."

Fossils obtained from the Trimley by-pass Southern Relief Road were;-

Bivalves			Gastropods		
Ensis	N		Neptunea contraria	N	S
Cardium parkinsoni	N	S	Neptunea (dextral)	N	S
Cardium angustatum	N	S	Nucella lapillus	N	S
Cardium edule		S	Nucella tetragona	N	
Mya arenaria	? N	S	Turritella incrassata	N	
Spisula	N		Turritella ? imbricataria		S
Glycimeris		S	Potamides tricinatum	N	S
Chlamys opercularis		S	Sipho	N	S
Macoma obliqua		S	Searlesia costifera	N	
Macoma praeteni			Natica multipunctata	N	
Astarte obliquata		S	"Natica"		
Astarte ?basterotii		S	Nassa reticosa		S
Astarte Sp.			Buccinum		S
Arctica islandica		S	Liomesus dalei		
Cyclocardia		S	?Mangila		
Venus imbricata		S	Turbonilla	N	
Mytilus edulis			Barnacles		S
Shark teeth		S	Mineralised wood		S
Ray tooth	N				
N = from cutting North of the old A45 road S = from cutting South of the old A45 road					

The valves of Mya arenaria and Cardium angustatum from this site are very well preserved; some way south of the railway bridge these species appeared to be in crag not far above the London Clay.

FELIXSTOWE (south side of Colneis Road, almost opposite Gleneagles Close.)

A small hole in the early 1970s showed c.2ft.3in. of made ground on c.1 ft, plus of shelly Red Crag.

IPSWICH (east side of junction of Spring Rd and Trafalgar Road)

A section in the mid-1950s showed a Red Crag section; the following fossils were seen;-

Bivalves	Gastropods
'Cardita'	Hinia granulata
Cardium edule	Nucella lapillus
Macoma obliqua	Turritella cf.imbricataria
Spisula	Shark tooth

The London Clay was probably hit in a trench at this site, as there were some London Clay septaria to be seen.

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No.19 (April 1971)

Corbett, W. B.	"Soil surveying in Norfolk and Suffolk.	2 - 31
Spencer, H. E. P.	"Iron mineral geodes" of Suffolk."	32 - 34
Banham, P. H.	"Temporary exposure in the Drift near Cromer.	35 - 38
Ranson, C. E.	"Report of a field meeting in Breckland, 20th September 1970.	39 - 42

No.20 (September 1971)

Funnell, B. M.	"The Origin of the North Sea."	2 - 16
Evans, H.	"Aspects of Geology in Education."	17 - 25
Markham, R. A. D.	"The Zones of the Gipping Valley Chalk Suffolk."	26 - 28
Markham, R. A. D.	"A Forest Bed Horse Jaw from Paston, Norfolk."	29 - 31
Joby, R. S.	"Railways and Geology - a walk from North Walsham to Paston and Knapton."	32 - 33
Cambridge, P. G.	"Report on Field Meetings to Wangford, and East Suffolk.	34 - 36
B. M. F.	"Bibliography of East Anglian Geology (15) Supplement 1969 (16) Supplement 1970	37 38 - 39

No.21 (April 1972)

Funnell, B. M.	"The History of the North Sea."	2 - 10
Bradshaw, M.	"Geology in a College of Education."	11 - 15
West, R. G.	The stratigraphical position of the Norwich Crag in relation to the Cromer Forest Bed Series."	17 - 23
Lord, A. R.	"A preliminary account of a research borehole at Syleham, Suffolk. "	25 - 28
Craig-Smith, S. J. & Chambers, G.	"Report on a field meeting to the Norfolk coast at Yarmouth and Overstrand."	29 - 40
Cambridge, P. G.	"Report on field meeting to the Norfolk Coast."	41 - 43

No.22 (September 1972)

McWilliams, B.	"Mammals of the Last Interglacial in Norfolk."	2 - 9
Norton P. E. P & Beck, R. B.	"Lower Pleistocene molluscan assemblages and pollen from the Crag of Aldeby (Norfolk) & Eason Bavents (Suffolk.)	11 - 31
Coleman, R.	"Geology at Gresham's School."	33-38
Joby, R. S.	"Books for studying G.C.E. and C.S.E. Geology."	39 - 42
Cambridge, P. G.	"Report of field meetings at Hunstanton and West Runton."	

No. 23 (April 1973)

West, R. G.	"A state of confusion in Norfolk Pleistocene stratigraphy."	3 - 9
Evans, H.	"A possible mechanism for involutions in the Nar Valley".	11 - 24
Gallois, R. W.	"The base of the Carstone in Hunstanton".	25 - 34
Wilson, R. C. L.	"Earth Science touching at the Open University".	35 - 49

No.24 (September 1973)

Hornby, R.J., Goldsmaith, J. G. & Goff, J. C.	"Eaton Chalk Pit - site of special scientific interest"	3 - 14
Randall, R. E.	"Shingle Street, Suffolk: an analysis of geomorphic cycle."	15-35
Funnell, B. M.	"Environmental geology of Sheringham."	37 - 44

No.25 (June 1974)

Editorial		1
McWilliams, B.	“The place of early collectors in the development of geological studies in Norfolk”.	3 - 14
Randall, R. E.	“Earth and life sciences in Adult Education”.	15 – 19
Seale, R. S.	“The geology of the Ely District”.	21 - 36
Seale, R. S.	“Map of the geology of the Ely District”.	37 - 38
Secretary’s Report for 1973		39 - 40

No.26 (September 1974)

Editorial		1
Thompson, D. B.	“The nature and assessment of Fieldwork in geology”.	3 - 46
Le Strange, H.	“Notes on Hunstanton Red Rock fossils”.	47 - 48

No.27 (April 1975)

Editorial		1
Chrostron, P. N. & Sola, M.	“The Sub-Mesozoic floor in Norfolk”.	3
Gallois, R. W.	“The base of the Crastone at Hunstanton beach - Part II”	21
Morter, A. A.	“A Barremian fauna from excavation at Hunstanton beach”.	29
Cambridge, P. G.	“Field Meeting to Bramerton, near Norwich”.	33
Gardner, K. & West, R. G.	“Fossil ice-wedge polygons at Corton, Suffolk”.	47
Banham, P. H.	“The Contorted Drift of North Norfolk”.	55
Evans, H.	The two-till problem in West Norfolk”.	61
Secretary’s Report for 1974		76
“Lyelliana”		20, 28, 54

R. M.

THE TATTINGSTONE DIGS: PRELIMINARY NOTES

The Geological Group has now had several ‘digs’ at the old crag pit near Tattingsstone hall, by kind permission of Mr. Caldwell.

The site, due to be flooded by the new reservoir, is important for two main reasons, (i) it is the southernmost exposure of Pliocene Coralline Crag, and (ii) it shows Lower Pleistocene Red Crag resting on Coralline Crag.

There are two main exposures within the pit, one on the left-hand side in the lower part of the pit (showing Red Crag on Coralline Crag), the other on the right hand side in the upper part (Red Crag consisting of bedded silts and shelly sands). The two exposures are about 30 feet apart.

Left hand Pit

In the left hand pit, trenches were dug to continue the exposure both upwards (into the Red Crag) and downwards (into the Coralline Crag). Due to groundwater, digging proved no more Coralline Crag than a 1963 attempt (see I. G. G. Bulletin No.1, 1966, pp.21-23); a boring was attempted but did not reach London Clay.

The section exposed and dug here was ;-

		Thickness
Red Crag	Ferruginous sand, some cross-bedding; some stone at base. (decalcified, as contained shell fragments in a lateral extension of the trench)	2ft 1 ins
	(h) Yellow sand, a few ferruginous silt bands (decalcified as contained shell fragments in a lateral extension of the trench)	1ft 4 ins
	(g) Pebbly shelly crag	1ft 0 ins
	(f) Alternating shelly and silty layers	1ft 1 ins

(cont)

(cont, The Tattlingstone Digs. Left hand pit)

Red Crag	Shelly sand	1ft 1ins
	Alternating shelly and silt layers	2ft 0ins
	Comminuted crag, ferruginous towards base	2ft 2ins
	Shelly crag, Glycimeris band at top	1ft 4ins
Coralline Crag	Comminuted crag with bands of indurated shelly limestone nodules	7ft 0ins
	Lilac coloured layer	3ins
	Crag, bottom fairly shelly	2ft 2ins
	Orange-coloured crag	1ft 4ins
	Auger hole (probably crag)	>4ft

The actual junction of the Coralline and Red Crag must be carefully looked for. Within the Red Crag, Cardium angustatum (the laterally-elongated cockle) was found in layer (f) and above; this is one of the most southerly records for this species. In a small lateral trench, layer (h) was seen to cut out (g) and rest on layer (f); (h) was no longer decalcified and consisted of shelly sands and thin ferruginous silts, with some pebbles at the base. In the main trench, (g) also rested with a small 'unconformity' on (f).

From the Coralline Crag, doubled-valved Glycymeris, Nucula, and Diplodonta, were found, and single valves of Panopaea, Venus ovata, Chlamys, and Astarte.

Right Hand Pit

Lateral variation in thickness of the various beds of the Red Crag is a prominent feature in the right hand pit. A large tree and its roots divide the section into two, a 'northern' (or left) and 'southern' (or right); the thinly laminated clay layer (re) enables correlation between 'northern' and 'southern' sections. Trenches were dug down to the Coralline Crag in both sections

- Northern Section.

Soil	1ft 0ins
(za) Silt, thick-bedded (1-2ins laminae), compact; some scattered pebbles (at the base "Cones" penetrate 1-3ins into next layer)	1ft 4ins
(zb) Shelly crag, stony. (occasional pebbles and Glycymeris at top)	10ins
	Thin banded sand and silt, occasional pebbles at base.
Silty silt, hard micaceous; bedding in places. Some double-valved molluscs.	2ft 2ins
(zd) Horizontally-bedded shelly crag, stony. Thin ferruginous clay bands at base.	1ft 0ins
(ze) False-bedded shelly crag; dip. approx. south. (alternate clay laminae and crag at base.)	3ft 0ins
(re) Thin-bedded silt and clay (c. ¼-½ ins laminae)	1ft 7ins
Sand with some shells and ferruginous silt bands	8ins
Stony shelly sand	7ins
Brown and yellow mottled silty sand	11ins
Shelly sand	ins
Brown and yellow mottled silty sand	11ins
Stony shelly crag, grading down into	11ft 3ins
Shelly sand, lumps of hard ?Coralline Crag at base	1ft 4ins
Coralline Crag	6ins seen

- Southern Section

(rd) Shelly crag, some thin silts stony base	2ft 1ins
(rc) Cross-bedded sand with shells and silt bands	3ft 9ins
Shelly crag, some pebbles	1ft 0ins
(re) Thinly laminated beds	1 ft 8ins
Light-coloured sand with shell fragments	5ins
Silty sand with shells	2ins
(rh) Brown silt and light-coloured sand; laminated	9ins
Stony shelly crag	9ins
Brown silt, ? bioturbated	1ft 1ins
Stony shelly crag	3ins

(cont on page 8)

(cont, The Tattlingstone Digs. Right hand pit - Southern Section.)

Shelly sand, grading down into	3ft 2ins
Light-coloured shelly sand with Mya and Glycimeris; Coralline Crag nodules at base.	7ins
Coralline Crag	6ins seen

Above marker horizon 're', 'rc' of the southern section is the same as 'ze' of the northern, and 'rd' of the southern appears the same as 'zd' of the northern. In the northern section 're' had cut down through 'rh' (of the southern) to rest on lower layers. Two vertical 'intermediate trenches' were dug between the 'left-hand pit' and the 'right-hand' pit, one trench on the north side of a tree, the other on the south side, the tree itself being approx. half-way between the 'left-hand' pit and the 'right-hand' pit.

- Trench on north side of tree.

Soil	10ins
(w) Shelly crag	1ft 3ins
(v) Silty bed	10ins
(u) Shelly bed	3ins
Silty bed	6ins
Sandy, some stones and a few shell fragments	9ins
Loam with stones	8ins
Glycimeris layer	< ½ ins
Cross bedded shelly crag and thin sandy layers	1ft 7ins
Shelly crag (mottled)	10ins
Laminated loam and sand (some shell fragments)	6ins
Shelly crag	1ft 2ins
(m) Laminated silt, conformable on	8ins
(l) Laminated silt and shelly sand	9ins

- Trench on south side of tree.

(t1) Silty bed	c.2ft 0ins
(t2) Decalcified bed	c.1ft 11ins
Brown silt	1ft 11ins
Shelly crag, apparently cross-bedded	7ins
Sand with shell fragments	2ins
Silty sand with shell fragments	8ins
Brown silt	4ins
Shelly sand, some thin silts, ferruginous band in lower part	11ins
(t9) Shelly sand with thin silts	1ft 6ins seen

A horizontal connection between the middle of the 'left-hand' pit and the base of the 'trench on the north side of the tree' showed that layer (f) of the former is the same as 'l/m' of the latter.

A second horizontal connection, from the top of the 'trench on the north side of the tree' via the top of 'trench on south side of the tree' to the top of the 'right hand' pit (northern section) suggested that 'w' and 'v' passed into 't1' which passed into 'za', and that 'u' passed into 't2' and 'zb'.

A third horizontal cut, from the base of 'trench on south side of tree' to the middle of 'right hand' pit (northern section) showed that 't9' passed into 're'.

It seems probable that 'l/m' of the trench on the north side of the tree is the same as 't9' in the trench on the south side of the tree.

R. Markham