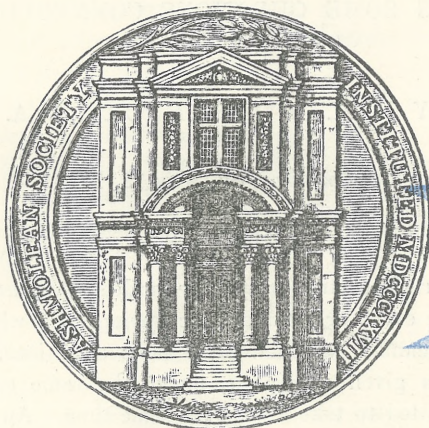


S. 1565-1566.

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With Abstracts of the Communications made to
the Society.



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S. 1565.

ON TIME;

INCLUDING SOME QUESTIONS CONNECTED
WITH THE CALENDAR.

BY

R. H. M. BOSANQUET, M.A.

Read on Monday, May 12, 1879.

ON MAMMALIAN REMAINS AND TREE-TRUNKS
IN QUATERNARY SANDS AT READING.

BY

EDWARD B. POULTON, B.A.,

OF JESUS COLLEGE.

Read on Monday, November 24, 1879.

H. J. S. SMITH, } Secretaries.
W. F. DONKIN, }



ON MAMMALIAN REMAINS AND TREE-TRUNKS IN
QUATERNARY SANDS AT READING. BY EDWARD
B. POULTON, B.A., OF JESUS COLLEGE.

Read on Monday, November 24, 1879.

(Abstract.)

THE pit in which these sands are exposed is on the Redlands estate, about a mile S.E. of the market-place. It is on the S. slope of the conjoined Thames and Kennet valleys and at a height of 36 ft. above the river-level. The sand was met with after clearing out a bed of gravel from 12-15 ft. thick. The elements of this latter are derived mainly from the destruction of the chalk (shewn by sub-angular flints, with some ice-transported and unworn) and Tertiaries (shewn by rounded flints). Indications of transport from a considerable distance were found in a few worn shells and fragments of limestone from the Oolites at or beyond Oxford. Scattered evidences of the high-level gravels also occur.

Beneath the gravel-bed a stratum of sand 8 ft. thick was found, and in it many horizontally-lying tree-trunks. These had been rolled some distance, as branches were absent. Microscopical examination of the tissue (in general much obscured and indurated by iron oxides), illuminated by reflected light, shewed at once that the wood was *Pinus*. Remains of the horse, cow, mammoth, and perhaps rhinoceros, were found at all depths in the sand and in the gravel above. A worked flake was found in the gravel-bed, but it is doubtful if it really belonged there (having fallen from the superficial alluvium). The sand-bed is derived from the reconstruction of the 'Suff Sands' of the Woolwich and Reading series (Lower Eocene) by fluvial agency. Between the sand and gravel there occur in patches beds of reconstructed 'Mottled Clay' from the same formation. In one place a curious assemblage of derived remains was found:—shells from the Woolwich and Reading beds (*Ostrea Bellovacina*), and shell-masses from the basement beds of the London clay (*Pectunculus Natica*, &c.), shells

from the oolites (*Ostrea Dilatula*), and chalk (*Inoceramus* and *Belemnites*), and with all these occurred bones and teeth of the horse.

While these reconstructed beds with their quaternarily-imposed remains are found to the N. (towards the river), to the S. the beds from which they are derived are seen unaltered, but the transition is unfortunately invisible. Examination of the whole slope shews that the gravel-bed belongs to the general system of river gravels. Higher up the slope these die away and leave the mottled clays exposed, and still higher the basement beds of the London clay cover these, and the summit (79 ft. above the river) is capped by high-level gravel. This is unstratified and consists of rounded quartzite masses and sub-angular flints.

Thus the slope at this point is a very good instance of one side of a typical river-valley, and in addition more exceptional appearances are seen in these reconstructed beds which remain at the foot of a low cliff of the easily removable elements from which they were derived. And thus another is added to the interrupted series of deposits that occur at intervals along the valley of the Thames, proving the existence of a larger river in its valley in some post-glacial time, flowing at a height of from 20 to 30 feet above the present level; while interesting proofs of the fauna and flora that lived on its banks are also afforded.

