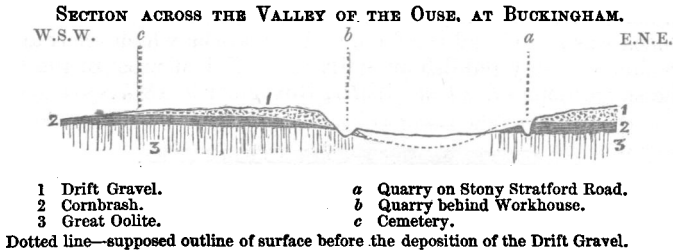


Errors of omission are pardonable enough, but such a bit of logic as this he must allow me to cry out against.

I add a sketch section, which will perhaps make my meaning clearer.



Yours obediently,

A. H. GREEN.

MONK BRETTON, BARNSELY,
Nov. 18th, 1867.

AGE OF THE THAMES VALLEY DEPOSITS.

. To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—Mr. Searles Wood, jun., in his essay on the structure of the Post-glacial deposits of the south-east of England, published in the last Quarterly Journal of the Geological Society, Vol. xxiii. p. 394, has made some remarks relative to a paper of mine, on the Lower Brick-earths of the Thames Valley, which ought not to pass without notice. Into the merits of his arc-theory, in explanation of the inequalities of the present surface of the ground, I do not intend to enter, nor into the question of the supposed existence of the faults in certain gravels and brick-earths. What immediately concerns me, is the assertion that the Thames gravel, *x* 4 of section twelve, of his essay, p. 409, overlies the mammaliferous brick-earths of Stonehams pit near Crayford, and his inference therefrom that there is no parallel between the brick-earths of Grays and those of the great pit near Crayford, which was stated to exist in my essay. In coming to my conclusion, so far from neglecting the evidence of super-position, I have gone over the ground repeatedly with Dr. Spurrell and Mr. Flaxman Spurrell, who have obtained a magnificent collection of mammals from it, and know it better than perhaps anyone else, and I have failed to detect the slightest proof of the Thames gravel in question actually overlying the brick-earth. Professor Morris also is fully persuaded of the exact parallelism in in point of time between the brick-earth at Crayford and that at Gray's Thurrock. I see therefore no reason for modifying my belief on that point. Mr. Wood assumes that the deposit on the south of Dartford Heath, and at Hill House, is of the same age as the fossiliferous beds at Crayford; but he adduces no proof of it whatever. Whether they be or not is perhaps an open question, but the fact that the brick-earths in the railway-cutting, immediately to the north of Mile End Terrace, and not more than half a mile from

Hill House, contain nearly all the testacea now living in our rivers, and none of those extinct in Britain, and no bones of mammals, proves them to be much newer than the neighbouring deposits containing older forms of life.

Again, the principal object of the essay seems to be to demonstrate the Post-glacial age of the valleys in the south-east of England, and especially that of the Thames. That demonstration has altogether eluded my grasp. An appeal to the author's elaborate maps, in the rooms of the Geological Society, supplies proof that is directly subversive of his theory. The whole question lies in a nutshell. Do you, or do you not, find Boulder-clay *in* the basins drained by the rivers of which he writes? Is it present in those of the Roding and Blackwater? A glance at Mr. Wood's map of the area drained by the former, shows that he recognizes that it is so found. In reference to the latter river I have to correct a mistake. Mr. Wood wrote to me for proof of its occurrence in the basin of Blackwater; and, unfortunately, without dreaming that my hurried note would be quoted in print, instead of referring to my note book, I ran my finger up an affluent of the Blackwater, instead of the main stream, and wrote Ingatestone and Mountnessing,—a mistake that Mr. Wood has italicised and noted with a mark of admiration. I ought to have written Witham Station. So far, indeed, as Mr. Wood's maps go, the Boulder-clay occupies any level, irrespective of inequality of surface, and therefore they prove that the hill and valley system "was sketched out" before the deposit of the overlying Boulder-clay. Of course, in many places, the Boulder-clay has been denuded by the present streams, and areas of London clay, of variable extent, have been exposed. If Mr. Wood restricts the term valley to the hollow in the immediate vicinity of a stream, and does not mean the area below a line drawn from one watershed to another, he is merely disputing about terms. If the excavation of the Thames Valley, using the term in the latter sense, took place in Post-glacial times, the deposits contained in it must also be Post-glacial, and the evidence of fossils characteristic of Pliocene mammals in France and Italy, is useless in classification. To say the least, no evidence has yet been adduced in support of this hypothesis, that is based merely on a belief that the entire valley-system of the South-East of England originated in centres of arc-like or curvilinear disturbance."

W. BOYD DAWKINS.

11TH NOVEMBER, 1867.

DR. A. VON KOENEN, ON THE BELGIAN TERTIARIES.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—In the November number of the GEOLOGICAL MAGAZINE, M. von Koenen, in dissenting from my way of viewing the Belgian and East Anglian Kainozoic formations, represents me in a manner to which I may reasonably object. My paper having been published in the Journal of the Geological Society I should be sorry should its members be misled.