

THE DENUDATION CONTROVERSY.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—Believing that an amicably-conducted controversy creates a desire to re-examine old, and pursue new lines of investigation, I am glad that my articles on "Denudation" have excited interest among eminent men of science.¹ I should be grateful to Mr. Aveline if, to his avowal of opinion, expressed in your last number, he would add his *reasons* for supposing that the Longmynd valleys have been excavated by streams. I have just read Professor Jukes' testimony to marine denudation in his "Student's Manual of Geology," published in the same year (1862) in which his paper on the River-Valleys of the South of Ireland was read before the Geological Society. The following is a brief extract:—"The passes leading across the crests of great mountain-chains could have been produced by no other cause than by the eroding action of tides and currents, as the mountains rose through the sea. . . . Isolated crags and precipices, or long lines of cliff, and of steep slopes, looking down upon broad plains, must have in like manner been formed by the sweeping power of the sea. Broad open valleys attest a similar origin, and speaking generally, the principal features in the form of the ground in all lands have been produced by this wide-spread action. . . . The results of this erosive action are exhibited to us often in the most striking manner in the gorges and ravines of mountain slopes" (page 101). The great reason why Professor Jukes so suddenly modified the above declaration of belief, would appear to have been the "revelation" that, during the *denudation*, our lands have not been a sufficiently long time submerged to enable the sea to accomplish it. I hope soon to be able to prove that the drift deposits of Siluria furnish undeniable indications of long, if not repeated, submergences, during comparatively recent periods.

Yours truly,

D. MACKINTOSH.

DISCOVERY OF FLINT IMPLEMENTS IN KENT.

To the Editor of the GEOLOGICAL MAGAZINE.

DEAR SIR,—It may be of interest to record the fact, that a number of flint implements have been found by Mr. J. Brent, jun., of Canterbury, between the Old Haven Gap and Reculvers. These implements, seventeen in number, are mostly of large size, of the Amiens type, very perfect. They were found strewn on the beach. One is a very interesting specimen, being extremely flat and sharp, of the figure represented in Sir Charles Lyell's "Antiquity of Man," page 114, fig. 8, and about the same size. It is remarkably weathered, and of an opaque white colour. The other specimens showed little or no

¹ In the last number at page 281, line 21, read *are the result* instead of "are not the result."

discolouration. Kent has also lately yielded a number of specimens to the careful search of Mr. W. Whitaker, F.G.S.; some of these are from the neighbourhood of Dover and Sandwich.

Yours truly,

GEORGE DOWKER.

STOURMOUTH HOUSE, *June 11th*, 1866.

QUARTZ CONGLOMERATE BED.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—There is at present on the shore at Cushendun in the County of Antrim, a mass of extremely hard Conglomerate, some scores of yards in length and breadth, and from thirty to fifty feet above the sea. This is composed of round pebbles of quartz rock, from two to four inches in diameter; and they occur so closely packed, that every one is in contact with another, and no room left, except for the sand which cements them, and which fills the openings between the pebbles, when originally heaped together.

These pebbles, as just stated, are of quartz rock and therefore all of one kind. There is no actual rock of the same kind, on the shore, nearer than—1. Malin Head, or Culdaff, in Donegal; 2. Belderg, east of Belmullet in Mayo, where it occupies the shore for fourteen miles; and 3. in the twelve bins, near Clifden, in Connemara, where it forms bands interstratified with Mica Slate.

This mass is backed by a hill of brown Devonian grits and shales interstratified, which extends from Cushendun to Cushindall. In both those rocks are a few round pebbles of quartz rock, similar to those in the mass on the shore, but in the rocks of the hill they are thinly disseminated, perhaps six or ten of them to a cubic yard.

Perhaps some of your numerous correspondents would have the kindness to explain how the pebbles of this mass were brought together, unmixed with pieces of rock of any other kind.

I am, Sir, Yours, etc., very truly,

JOHN KELLY.

38, MOUNT PLEASANT SQUARE, DUBLIN, 22th May, 1866.

Probably all the other pebbles were of softer materials than quartz and were consequently converted into mud and sand by the grinding motion imparted to the mass by the sea, when the Conglomerate formed the shingle-bank of the ancient coast.—*Edit.*

OBITUARY.

HENRY DARWIN ROGERS, LL.D., F.R.S.L. & E., F.G.S., Professor of Natural History in the University of Glasgow, died on Tuesday, May 29th, 1866. Though a native of the United States, he was of Scotch extraction, and the member of a family traditionally devoted to the culture of the exact sciences. At the early age of twenty-one he was appointed Professor of Chemistry and