

In answer to question 1, I would refer to *Phil. Mag.* 1874, page 205, also to pages 446, 467, *GEOL. MAG.* Dec. II. Vol. II. 1875, for my formulæ of increase of velocity of water with increase of quantity flowing, although slope is not altered. In answer to question 2, the Pluvial period is described, page 105, *Quart. Journ.* vol. xxiv. 1868, Tylor, Amiens Gravel. In answer to question 3, Hopkins's paper referred to is line 3, page 233, vol. viii. *Cam. Phil. Trans.* In answer to question 4, I explained in my letter how I arrived at the velocity being three times greater in the Pluvial period. But on page 63, vol. xxv. *Quart. Journ.* 1869, I give some cases in which the water flowing must have been 129 times greater than at present. At page 9, *op. cit.*, I suggest a rainfall of 300 inches in the Pluvial period.

I would also recommend Mr. McJames to read Login on the Ganges Valley, who refers to my papers in the *Quart. Journ. Geol. Soc.*

With regard to a wet period, M. Belgrand, of Paris, in his great work on the Gravels of the Seine, found, in 1871–2, that it was impossible to explain the size of the valleys and the deposits of gravel, without assuming a wet period in which the rainfall was twenty or twenty-five fold that at present in that part of France, thus confirming my view published in 1868. By the equation, page 467, Vol. II. Dec. II. *GEOL. MAG.* the velocity increases the cube root of the increase of the quantity. If the rainfall was as stated by Belgrand and myself, the velocity of streams should be three times as much as at present, and the moving force would be as the sixth power. Then $3^6 = 729$, that is to say, where a stone now of 1 lb. weight can be moved, a stone of 729 lbs. weight could then have been lifted. In the Upper Ganges, running through a great gravel formation, the water-level never reaches now within 30 feet of the top of the banks. India exhibits the proof of a former Pluvial period.

LONDON, *March* 11, 1882.

A. TYLOR.

SUPPOSED LAURENTIAN ROCKS.

SIR,—When I received the *March* Number of the *GEOL. MAG.*, I learned that the Philistines were upon me; but as I have so little time to spare, that I cannot even read the papers, my letter must necessarily be short.

Dr. Callaway visited the Wexford district without my maps, and left the most important sections unvisited, and that he does not know my work is evident from what he has written about it. I suggested he should visit West Galway; because, in that country, he would find the rocks so well exposed that his supposed unconformability in the Wexford rocks southward of Greenore would be then explained. I cannot understand where he obtained the obsolete maps; as, after my maps of the Wexford district were published, I could not obtain copies of the old ones from any of the authorized Irish publishers.

To Professor Hull's letter it is unnecessary to make any reply.

GOREG, *March* 6th, 1882.

G. H. KINAHAN.