

CORRESPONDENCE.

GEOLOGICAL HYPOTHESIS.

SIR,—In the July number of your Magazine, just received, there is an article called “A Word on Geological Hypothesis,” by Professor H. Macaulay Posnett.<sup>1</sup> After some admirable platitudes on the subject of scientific dogmatism, he proceeds to explain why he has been forced to tender this kindly advice by the following illustrations.

“Shortly after the Tarawera eruption of June, 1886, some professors of science proceeded to the Rotorua district and there held a Maori meeting. The Maoris were told that, the lines of volcanic energy having such and such directions, they need entertain no fears of the recurrence of the late disaster—‘they might plant their kumeras in peace.’ Hereupon an old Maori chief, with the usual sagacity of his race, rose and remarked, ‘If the volcano-doctors know so much about what is to be, what a pity it was they did not come and forewarn us of the eruption.’ Needless to say, the ‘volcano-doctors’ had no reply; and in our civilized views of volcanic forces it would be far better to own ignorance than to even hint a claim to foresight where it does not as yet exist.”

Now as I am one of the ‘volcano-doctors’ referred to, and Professor Posnett was at the time in Auckland, 170 miles away, I suppose I know more about what took place than he does. The following is a plain statement of the facts. Professors Thomas and Douglas-Brown, of the Auckland University College, and myself were commissioned by the N.Z. Government to report upon the eruption. The Maoris, naturally, were in a great state of alarm. Many had left and quartered themselves on neighbouring tribes; and the remainder wanted to leave, but had no land to go to. Under these circumstances the Resident Magistrate at Rotorua asked us whether we could help in dissipating these fears. We consented to try. He called a meeting, and I, as senior, was deputed to make the speech. I pointed out that as the eruption had only lasted for a few hours and had been over for more than a week, it was not likely that it would recur in the near future, as time must be allowed for the subterranean forces to again accumulate. Even, I said, if a second eruption should take place it would probably not be a severe one, like the first, for an opening had been made through which the steam could now escape. I said nothing about lines of volcanic energy. The Maoris saw the common-sense of these reasons; their fears ceased, the runaways returned, and crops for the coming season were planted. I do not remember being asked why we had not forewarned the Maoris of the eruption—it sounds like a newspaper yarn—but if I was so asked, no doubt I made it clear to my audience that the two things were very different; a point which Professor Posnett appears not to see.

<sup>1</sup> GEOL. MAG., 1900, pp. 298–302.

He then goes on to say: "It is worth adding that, not very far from the Rotorua district, in the now famous gold-fields of the Thames, an eminent but dogmatic and hasty geologist many years ago prophesied that no gold could there ever be found." As the Thames gold-fields were well established fifteen years or more before Professor Posnett came to Auckland, this charge must rest on second- or third-hand evidence; for, to the best of my knowledge, the prophecy was never published. As I was living in Auckland at the time of the discovery of the fields (1867), I should certainly have heard of it if any scientific man had said publicly that no gold would be found at the Thames. When Professor Posnett was in Auckland he could easily have investigated the truth of club gossip, and he should have done so before repeating it as a well-attested fact. I therefore call upon him either to produce his evidence or to acknowledge that he has done the very thing he is blaming geologists for doing, namely, made dogmatic statements without giving any hint that they may not be true. F. W. HUTTON.

CHRISTCHURCH, NEW ZEALAND.  
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#### THE AGE OF THE RAISED BEACH OF SOUTHERN BRITAIN.

SIR,—Mr. Tiddeman's extremely interesting note in the October Number "On the Age of the Raised Beach as seen at Gower" seems to be supported by several facts, which I had observed and already published with regard to the Raised Beach in Sussex. The section to the west of Brighton exhibits, near the top, a distinctly festooned arrangement of the lines of bedding, which can be best explained on the supposition of the occurrence of interbedded ice-masses.<sup>1</sup> Another important point is the discovery of two species of Ostracoda of northern habit in the Sussex Raised Beach.<sup>2</sup> And further, the Rubble-Drift immediately above the Raised Beach at Aldrington shows decided evidence of a continuation of a rigorous climate, for here there are some blocks of almost pure foraminiferal sand, very friable, but with their own wavy bedding preserved, which leads one to conclude that these fragments were transported in a frozen condition.<sup>3</sup> I may also, perhaps, be allowed to draw attention to the excellent sections of the Raised Beach and Rubble-Drift which can now be visited at Copperas Gap, near Portslade-by-Sea, but which is being rapidly cut away by the work of sand excavation.

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<sup>1</sup> Transactions of the Union of South-Eastern Scientific Societies, 1900, p. 58.

<sup>2</sup> Proc. Geol. Assoc., vol. xvi, pt. 6, p. 263.

<sup>3</sup> *Ibid.*, pp. 267, 268.