

CORRESPONDENCE.

ORIGIN OF THE IGNEOUS ROCKS.

SIR,—I was much interested to read in your last issue the excellent review of Professor's Daly's latest work appearing above the initials "R. H. R." May I draw your reviewer's attention to the fact that such points as the quantitative composition of the igneous rocks and the effects of assimilation upon them have been dealt with at some length in England before now, as your own pages can testify. In this Magazine as long ago as June, 1904, I entered a protest against the calculations made on a purely arm-chair basis by F. W. Clarke and A. Harker with regard to the former problem, and Mr. Clarke has, to some extent, modified his calculations as a result of this and a succeeding paper on the same subject. With regard to assimilation, a process intimately connected with the question of composition, Professor Grenville Cole has been crying in the wilderness for many years past, and the late Dr. Johnston-Lavis has done good work in the same direction, while I attacked the problem on a much wider basis in a lengthy paper read before the British Association in 1905. This has been followed up by a general work on petrology, of which an expanded form was published by Messrs. Chapman & Hall last year. In substance it is a systematic exposition of the subject based on assimilation as opposed to the purely hypothetical 'differentiation' basis which has become so popular of late years. It may, perhaps, be added that Professor Daly has placed a great stumbling-block before many geologists by his advocacy of a prevailing basic magma, below the granitic one, as a primary feature of his work.

49 LONDON WALL, E.C., Oct. 6, 1914.

F. P. MENNELL.

THE OLD OR GREY GRANITE OF THE TRANSVAAL AND ORANGE RIVER COLONY.

SIR,—On May 13 of this year a paper was read in the Geological Society of London by F. W. Penny, B.Sc., F.G.S., "On the Relationship of the Vredefort Granite to the Witwatersrand System" (see *GEOL. MAG.*, July, 1914, pp. 332-3), wherein the writer suggests "that the Vredefort Granite, instead of being 'Archaean', is of a post-Pretoria-pre-Karoo age, if not contemporaneous with, at least connected with, the same epoch of igneous activity as the 'Red Granite' of the Northern Transvaal".

Thus nearly six years after the publication of my paper on "The Age of the 'Old or Grey Granite' of the Transvaal and Orange River Colony" in the *GEOL. MAG.*, Dec. V, Vol. V, No. 534, pp. 552-9, another serious investigator arrives at the identical conclusion, evidently quite independently, as Mr. Penny, although quoting various authors, seems to have been quite unaware of the existence of my paper above mentioned.

I still hold the firm conviction that the adoption of the above detailed conclusion, although revolutionizing to a large extent all that has hitherto been accepted, will prove the only way to place South African geology on a sound and true foundation.

HAARLEM, HOLLAND, Sept. 21, 1914.

C. G. S. SANDBERG.