

On the composition of a stone from the meteoric shower which fell at Dokáchi, Bengal, on October 22, 1903. The small crusted stone examined, weighing 17·8 grams, shows chondritic structure, and belongs to the class Ci of Tschermak. The chief constituent minerals are bronzite (37·9 per cent.), olivine (37·7 per cent.), nickel-iron (18·5 per cent.), troilite (4·1 per cent.).—Dr. G. F. H. Smith exhibited cut and rough specimens of synthetical sapphire, recently produced by Professor Verneuil, oxides of iron and titanium being the colouring agents.

CORRESPONDENCE.

THE USE OF THE TERM 'LATERITE'.

SIR,—I have read Mr. T. Crook's letter in the November number of this journal with interest, but fail to see that he has made it easier for everyone to agree with him in his use of the term 'laterite'. I do not say that the engineers of the Malay Peninsula are correct in their use of the term. They have not adhered to Buchanan's definition, but have extended it to cover masses of ironstone, which, even had they occurred in decomposition products of crystalline rocks, I am quite ready to admit would not have been included in the term 'laterite' by the originator. Similarly, I admit that in other countries the original definition has been abandoned, which is perhaps deplorable; but the question that occurred to me immediately on reading Mr. Crook's remarks was, what reason has he to consider himself in a better position as regards the original definition, which is conveniently given in his letter, than the rest?

The essential point in Buchanan's definition is the fact that laterite 'sets' when exposed to the atmosphere, and can be used as brick. Buchanan also says that it contains a very large quantity of iron in the form of red and yellow ochres. Now Mr. Crook says that Buchanan attached to the term 'laterite' a significance that is in strict agreement with modern usage, by which we must understand Mr. Crook's insistence on the importance of the free aluminium hydroxides. I can only take this to mean that in Mr. Crook's opinion the 'setting' of laterite is essentially due to the dehydration of the aluminium hydroxides, and if Mr. Crook can prove this proposition I am prepared to accept his definition as a somewhat obscure paraphrase of Buchanan's definition. At present I am unable to accept it as a paraphrase because, although a change from gibbsite to the hard but very brittle diasporé may to a small extent account for the hardening, it is but reasonable to suppose that in the case of Buchanan's indurated clays containing "a very large quantity of iron", the redistribution and partial dehydration of the ferric hydrate are the factors that make laterite commercially valuable (vide *Manual of the Geology of India*, p. 379, and Sir Thomas H. Holland's paper in the 1903 volume of the *Geol. Mag.*, pp. 65, 66, and 69).

It is clear that the original definition of laterite has been generally ignored, perhaps because it appealed to an economic rather than a scientific point of view. But with that idea of economic value

there was in the earlier writings always more than a suggestion of an abundance of iron, and those who apply the term now to distinctly ferruginous weathering products may be no nearer heresy than those who, following up the work of Max Bauer and Dr. Warth, insist on the presence of free aluminium hydroxides as the test of laterite. To me the term seems to be now of little value, and unless we can agree to apply it only to such materials as were described by Buchanan as possessing qualities that make them workable as a substitute for brick, I do not see why it should be retained. Mr. Crook tells me that I am not justified from a scientific standpoint in suggesting that highly aluminous laterite should be called bauxite. I follow Mr. Crook's argument, but since the following phrases occur in the papers by Sir Thomas Holland and Dr. Warth & F. J. Warth published in the *GEOLOGICAL MAGAZINE* for 1903—"laterite . . . agrees in essential characters with bauxite"—"the essential chemical similarity between bauxite and laterite"—"laterites in situ which are bauxites"—"these bauxites in blocks and in powder"—"laterite is bauxite in various degrees of purity"—I feel that I am justified in advocating simplicity of diction as opposed to the redefining of a term the utility of which to geologists is doubtful.

The engineers, even if they have misapplied the term, are now the chief users of it, and weight of numbers will compensate such lack of scientific accuracy as exists in the eyes of the world at large. In local publications geologists placed like myself must make use of the term in order that local readers may know what is being discussed, and it was the objection in the Imperial Institute Bulletin to such a local use of the term that led me to write in the first instance, since I foresaw that the same might happen to me also. I believe that all geologists are agreed in aiming at simplicity of terminology. Can any geologist who has kept abreast of the literature use the term 'laterite' now without feeling an obligation to explain what he means by it? And is it not simpler to say directly what we mean without using a term whose original significance we have discarded?

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January 19, 1910.

CAPE GEOLOGY.

SIR,—Will you allow me to point out that your reviewer has made a mistake in his otherwise very kind remarks on the book on Cape Geology written by Mr. Du Toit and myself? He says that "no references are given to any of the authorities quoted": a glance through the book will show that references to a considerable number of publications, in fact whenever such a course seemed desirable, are given in the foot-notes. In a book of this sort the omission of references would be a very serious fault, so the oversight on the part of the reviewer should be corrected.

ARTHUR W. ROGERS.

FRASERBURG, CAPE COLONY.
January 1, 1910.