

to weigh something in the scale against "an inspection of the minerals." I fancy, too, that my acquaintance with the literature of the diamond is more extensive than Dr. Flett's, in spite of my having been for years out of reach of a scientific library. I have also studied specimens from most of the important diamond localities that I have been unable to visit. And I can only record my conviction, after a review of all the facts, firstly, that the Somabula diamonds, as also those of Brazil, India, and New South Wales, are derived from quite a different source from that of the sapphire, topaz, chrysoberyl, staurolite, kyanite, etc., with which they are associated, as has indeed been actually proved in the case of New South Wales; and secondly, that there is nothing to contradict the idea that the ultrabasic rocks ('blue-ground' and its allies) are invariably the source of the diamond.

The question is no mere academic one. I should be only too delighted to gain an opportunity of describing a new matrix for the diamond. This, however, is the position. I am every day asked for advice by prospectors, men whose livelihood depends on their success in finding mineral deposits of possible economic value. When consulted about diamonds, what is one to tell such men as these? In face of the fact that every South African mine (and there must be at least thirty now working) is in 'blue-ground,' is one to advise them to look for diamonds in staurolite or kyanite schists? Some, through ignorance, have actually done work on such rocks—needless, to say, without finding any diamonds. I even know of a locality where staurolite, kyanite, tourmaline, garnet, and rutile can be got from a single specimen. Could one in good faith urge the spending of money on it in the hope of its developing into a diamond-mine? I certainly do not think so myself, whatever other people's views may be.

F. P. MENNELL.

RHODESIA MUSEUM, BULAWAYO.

December 28th, 1906.

#### MARINE RIPPLE-MARK.<sup>1</sup>

SIR,— . . . Will you permit me to point out that in Mrs. Ayrton's researches on Sand-ripples, so far as they concern geologists and marine ripple-mark, there are four *experimental* fallacies. Mrs. Ayrton describes her apparatus as follows: "In this trough, six feet long . . . the water, which is about a foot deep, is now made to swing periodically backwards and forwards by means of an electro-motor" (Abstract of lecture to Section G at Cambridge in 1904).

In the real thing we find a series of periodically oscillating waves moving in one direction over a fixed bottom, and expending themselves on a sandy shore. In Mrs. Ayrton's experiment we have an oscillating bottom, perfect reflection from vertical ends, waves moving in opposite directions, and, as one result, stationary waves in the experimental tank. None of these four conditions obtain at sea, and Mrs. Ayrton's results and conclusions, interesting though they are to physicists, have practically no bearing on the phenomena of the sea-shore and the sea-bottom.

A. R. HUNT.

SOUTHWOOD, TORQUAY.

<sup>1</sup> [Unavoidably delayed in publication by want of space.—ED. GEOL. MAG.]