

answer to any opponent, or a prompt explanation of any apparent difficulty in the acceptance of their master's teaching. If any one claimed that basalt was of volcanic origin, he was at once confidently assured that this was an entire mistake, for the great law-giver of Freiberg had pronounced it to be a chemical precipitate from water. If he ventured to quote the columnar structure as in favour of his view, he was told that he ought to know that lava never assumed this structure,¹ and that "rocks which have been formed or altered by the action of heat are most distinctly different from those that constitute the great mass of the crust of the globe."² If he brought to the unabashed Wernerian a piece of obsidian, and asked whether such a rock should not be admitted to be a volcanic glass, "Nothing of the kind," would have been, in effect, the immediate reply. "It is true that the rock does resemble 'completely melted stony substances, and occurs in volcanic countries,' but the notion that it is itself of volcanic origin is quite unfounded, 'because obsidian has never been observed accompanying lava, because it is connected with basalt, and because it contains a considerable portion of water of composition, which is never the case with true volcanic rocks.'"³ If the questioner, still unconvinced, presumed to present a piece of pumice, pointing to its froth-like structure and its presence in volcanic countries as evidence of its former fusion, the answer would have been an equally prompt and decided negative. Let me quote the actual words of a Wernerian in

¹ Jameson, *op. cit.* p. 58.

² *Op. cit.* p. 74.

³ *Op. cit.* p. 196.