all of the carbonate of lime of the earth's surface has been formed from the decomposition of the soluble lime-salts of the sea, by carbonate of soda (and other soluble carbonates.) I, moreover, lay down the proposition that "animals can only appropriate the carbonate of lime already formed." In the face of these quotations, cited by Mr. Forbes, he says, as if charging me with holding the view. that if limestones were "formed by precipitation, they would have, from the moment of their deposition, a decided crystalline structure," while "Sorby's microscopical researches prove satisfactorily that all limestones, from the most ancient up to the most recent, are solely formed of the debris of organisms ;" this will probably be surprising news for Mr. Sorby, and a decisive blow for those who question the organic nature of Eozoon. I am prepared to go as far as any reasonable man in asserting the organic origin of limestones, and have, as every one must see, implied the intervention of organic life, when I say, "animals appropriate the carbonate of lime, etc." The question is, however, whence comes the carbonate of lime to supply the wants of these animals? Mr. Forbes declares that "zoologists believe that marine animals can utilize the other salts of lime existing in the ocean," evidently the sulphate or the chlorid of calcium once so abundant there. Will Mr. Forbes or the zoologists explain what has become of the acids once combined with the lime which has built up the thousands of fees of limestone, chiefly fossiliferous, which are found in the earth's crust? The only plausible chemical explanation is that which I have given, namely: that the chlorid of calcium has been decomposed by carbonate of soda derived from decaying feldspathic rocks, giving rise thereby to common salt and to the carbonate of lime which has supplied the marine animals.

As regards the question of the origin of dolomites, which Mr. Forbes next proceeds to notice, he will do well to consult my paper on the subject in the American Journal of Science for July, 1866, ([2] XLII, 49). In this, at §112, he will see that, apart from the formation of stratified sedimentary dolomites, I insist upon the frequent occurrence of dolomite as a mineral of secondary deposition, lining drusy cavities, filling veins, and even the moulds of fossil shells. To such cases the observations of Sorby may possibly refer. I can find no other account of his researches than the brief note in the Proc. of the Brit. Assoc. for 1856, cited by Mr. Forbes. Although I have a great respect for Mr. Sorby as an investigator, I have very little for the old theory of dolomitization of sedimentary limestones. No one who has carefully studied, as I have done for