The Age of the Earth.

I AM surprised to observe, in the article which Prof. Sollas has written on this subject in your issue of the 4th inst., p. 533, that he speaks with approval of Dr. A. R. Wallace's method of calculating the earth's age. About two years ago (I have only this week's number of NATURE at hand) I wrote to you on this subject, and was under the impression that I had proved the complete fallacy of Dr. Wallace's method of calculation.

To put Dr. Wallace's view briefly, he assumes that deposition within a limited area of, if I remember rightly, 3,000,000 square miles, goes on 19 times as fast as denudation over the whole land area, which is 19 times as great, and then argues that the whole maximum thickness of the stratified rocks (and hence the earth's age) could be deposited in 1/19 of the time required to carry away from an equal area of land an equal bulk of material.

The fallacy consists in assuming that a great rapidity of deposit over a limited area can in some way allow of the deposit or formation of sedimentary rocks at a greater rate than that of denudation.

It is obvious that, in a given time, no greater volume of deposits can be formed than the volume of material denuded in the same time. If, therefore, as Prof. Sollas assumes, 1/2400 of a foot of sediment per annum is denuded from the land area, by no arrangement can a land area of equal extent, consisting of sedimentary rocks of the same composition and thickness as those which actually constitute the land area, have been formed as a whole more rapidly than 1 foot thickness over 57,000,000 square miles area in 2400 years. Taking the estimate of Prof. Sollas, viz. 164,000 feet, as the maximum thickness of the sedimentary rocks, and taking the existing land area to be accounted for as 57,000,000 square miles, the time required to form an area of 57,000,000 square miles of rock 164,000 feet thick, at 1/2400 of a foot per annum, is 393,600,000 years, unless the area undergoing denudation was greater or less than it is at present (and it could not be four times as great as at present). No concentration of the deposit over a small area would shorten the time required by a single moment. BERNARD HOBSON.