

again emphasises in his letter to you. With this letter *causet questio*, I know no one now who is willing to support Agassiz's theory, and we may take it to be dead. *Requiescat in pace.*

Meanwhile, however, let us do justice to those whose observations and logic have dispelled one phase at least of the glacial nightmare. Dr. Wallace attributes this to his friend and correspondent, but the work had already been done, and amply done, by others, as I tried to show in my recent book. In it I have quoted largely from the admirable remarks of Prof. Orton, Dr. Ricketts, M. Crevaux, and last, but not least, Prof. Hartt himself, who as far back as 1871 had given up Agassiz's views in regard to the Amazonian glacier (see *American Journal of Science*, 3rd ser. vol. i. pp. 294-5).

When we have got rid, however, of Agassiz and his Amazonian glacier, we have not got rid of all our difficulties. While we cannot accept the notion of tropical ice-sheets, we have still to explain the existence of erratic phenomena in the tropics, such as those described by Schomberg in Guiana, by De la Beche in Jamaica, by Blandford in Southern Persia, by Chardin in Media, by Belt in Nicaragua, and by Hartung in the Azores. There seems some difficulty in explaining these phenomena without invoking the former existence of local glaciers in parts of the tropics where they no longer exist, and also the occurrence of large diluvial movements there. I should be greatly indebted to Dr. Wallace, and so would others, for his views on this subject. There remains another and a more critical difficulty which I must reserve for another letter. In conclusion he will permit me to thank him for his very valuable and courteous letter.

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The Glaciation of Brazil.

DR. WALLACE'S pointed reference to myself in this week's NATURE induces me to send you these few lines.

It has been said by more than one critic of my book on the "Glacial Nightmare" that in some cases I was merely slaying the slain, and notably in regard to Agassiz's views about the glaciation of Brazil. It has been overlooked that Agassiz's experience and authority on glacial matters were unrivalled, and that he had written on this very question: "An old hunter does not take the track of a fox for that of a wolf. I am an old hunter of glacial tracks, and I know the footprint whenever I find it."

Again, Dr. Wallace, whose knowledge of the tropics is so profound, had written: "Professor Agassiz was thought to be glacier-mad, but if we separate his theories from his facts, and if we carefully consider the additional facts and arguments adduced by Prof. Hartt, we shall be bound to conclude that however startling, the theory of the glaciation of Brazil is supported by a mass of evidence which no unprejudiced man of science will ignore merely because it runs counter to all his preconceived opinions." Again he says: "It can hardly be maintained that the discoverer of glacial phenomena in our own country, and who has since lived in such a preeminently glaciated district as the Northern United States, is not a competent observer; and if the whole series of phenomena here alluded to have been produced without the aid of ice we must lose all confidence in the method of reasoning from similar effects to similar causes, which is the very foundation of modern geology."

Lastly, Mr. James Geikie, in his second and revised edition of "The Great Ice Age," quotes Agassiz's conclusions without a word of protest or warning (*op. cit.* 484-5).

With these strongly expressed views before me, it was impossible to ignore the issue, and it can hardly be said I was slaying the slain in criticising those who believed in tropical glaciation.

I did not then know that in his subsequent work on Darwinism Dr. Wallace had, with that candour which makes his works so valuable to some of us, qualified and partially withdrawn his previous conclusions on the subject, a fact which he