America on its climate is only to express in another form the influence produced by the currents, for it is simply because of this extension that the Gulf Stream does not reach the eastern shore of that part of America to which the comparison with Europe applies until it has passed through the refrigerator of the Polar Basin, and issued therefrom as the Polar, or Labrador current. Land not lofty, such as is most of that which forms the Polar extension of North America, has of itself no more refrigerating effect than sea which ameliorates climate only when warmed by equatorial currents, as the condition of the great Antarctic expanse of ocean sufficiently proves. I venture indeed to think that it has less so. Before Mr. Wallace can appeal to any ameliorating influence exerted on the climate of Europe by the Mediterranean (an influence to which the isothermals lend no countenance) as contrasted with America, he should show that the valley of the Mississippi was not submerged during the Glacial period. Some American geologists, as *e.g.* Dr. Newberry, insist that it was; and if so, not only would those conditions, on the absence of which Mr. Wallace relies, be present, but their influence be more considerable than any produced by the Mediterranean, because the water of the Gulf of Mexico, of which such submergence would form an extension, is hotter than that of the Mediterranean.

In testing Mr. Croll's theory, however, we may confine ourselves to North America alone. Owing to the Gulf Stream leaving the eastern shore where these differences begin, and to the Labrador current hugging it down to that point, while the western shore is throughout washed by the warm water of the Pacific, the climate north of the 40th parallel presents on the eastern and western coasts contrasts similar to, though not quite so great as those which obtain between the West of Europe and East of America. Now the glaciation on the eastern and western sides of America follows these existing differences of mean temperature just as it does in the case of Western Europe and Eastern America. Turn where we will, both in the northern and southern hemispheres, the climate of the Glacial period appears to have been an uniform diminution of mean temperatures as they now exist by virtue of geographical conditions and ocean currents; and it is this which in my mind points so strongly to that period having resulted from a cosmical cause wholly unconnected with these conditions, that is to say, to a diminution in the heat-emitting power of the sun. SEARLES V. WOOD, Jun.

July 9th, 1880.

P.S.—In my first letter I should have instead of "winter cold," said *mean temperature*, as it is this which regulates glaciation.

GLACIAL AND POST-GLACIAL.

SIR,—In answer to the geological questions set by my friend Mr. Dalton in the July Number of this MAGAZINE, I would remark that I know nothing in the brief notice of his "Geology of Colchester" that can be gainsaid. The statement that the *Bison, Elephas antiquus*,

E. primigenius, etc., are forms "so distinct from those which are known to have inhabited this country in Post-Glacial times," requires no modification: it is a fact. Nevertheless as my remarks were made in the hope of eliciting some discussion. I will, with your consent, try to pass Mr. Dalton's examination. Thus the remarks on the term "Post-Glacial" were intended as a protest against the use, *without explanation*, of such a definite classification to beds whose age has been a matter of controversy; and when (as regards the district described) precision is not possible in the present state of the evidence. I use the terms Glacial and Post-Glacial in the same sense as the term Carboniferous is used, to mark periods of time, no matter what deposits took place, or what fluctuations of climate occurred. I hold that the Glacial period in Britain may very conveniently be regarded as synonymous with the Pleistocene and Palæolithic age: deposits with Palæolithic implements (Brandon Beds) having been discovered to be of strictly Glacial age, and such implements (where found in mammaliferous deposits) having as associates the group of animals in question. The passing away of the Glacial conditions in Britain allowed of the incoming of the present fauna. It might, of course, be said that as land-ice is now met with in the polar regions, we are still living in the Glacial period; with equal propriety might it be said that we are still living in the Pliocene or in the Cretaceous period, but there would be no limit to such diversions. We can no more expect to correlate our local divisions with those in other parts of the world, than we can make the reigns of our sovereigns correspond with those of rulers in other countries. The following classification seems best to meet the requirements of the case, the Pliocene beds being inserted in order to show their relations:—

Recent.	Historic Neolithic and Prehistoric.	
Pleistocene.	Palæolithic and Glacial.	
Pliocene.	Upper Crag.	Forest Bed Series and Bure Valley Beds. Norwich and Red Crags.
	Lower Crag.	Coralline Crag.

Heath Villa, Fakenham,
July 3rd, 1880.

Horace B. Woodward.

British Museum (Natural History).—It will interest the scientific public to learn that the removal of the Natural History portion of the British Museum Collections to the new building prepared for their reception (on the site of the old 1862 Exhibition), in Cromwell Road, has actually commenced. The whole of the Mineralogical, and a portion of the Geological Galleries are closed to the public, and the collections are being steadily transferred. Mr. Lazarus Fletcher, M.A., F.G.S., has been appointed Keeper of Mineralogy, *vice* Professor N. S. Maskelyne, F.R.S., M.P., resigned. Dr. Henry Woodward, F.R.S., has been appointed Keeper of Geology, *vice* G. R. Waterhouse, Esq., resigned.