

becomes increasingly unsatisfactory as the phenomena are developed into fuller appreciation. The more we consider the asymmetry of the ice distribution in latitude and longitude, and its disparity in elevation, the more difficult it becomes to explain the phenomena upon any astronomical basis. If we were at liberty to disregard the considerations forced upon us by physicists and astronomers, and permit ourselves simply to follow freely the apparent leadings of the phenomena, it appears at this hour as though we should be led upon an old and forbidden trail,—the hypothesis of a wandering pole. It is admitted that there is a *vera causa* in elevations and depressions of the earth's crust, but it is held inadequate. It is admitted that the apparent changes of latitude shown by the determinations of European and American observatories are remarkable, but their trustworthiness is challenged. Were there no barriers against free hypotheses in this direction, glacial phenomena could apparently find adequate explanation; but debarred—as we doubtless should consider ourselves to be at present—from this resource, our hypotheses remain inharmonious with the facts, and the riddle remains unsolved.”

It should be observed here that the unsolved “riddle” is that of a continental ice sheet. This, as we have already seen, is probably insoluble in any way, but fortunately needs no solution, being merely imaginary. If we adopt a moderate view as to the actual conditions of the Pleistocene, the geographical theory will be found quite sufficient to account for the facts.

Let it be observed here also, in connection with the above thoughtful and frank avowal of one of the ablest of American glacialists, that the geographical theory provides for that “asymmetry” or irregular distribution of glacial deposits to which he refers; since, at every stage of continental elevation and depression, there must have been local changes of circumstances; and the same inequality of temperature in identical