

the original order of succession among the crystalline schists of a particular region, it is even more difficult to form a satisfactory judgment as to the stratigraphical relations of the schists of two detached regions. There is usually no common basis of comparison between them, except similarity of mineral character and structure. But as it can be shown that even in a single area the crystalline schists may sometimes represent the results of many successive operations continuing through a long series of geological periods, it is obvious that the task of correlating these rocks in distinct, and especially in widely separated, areas must be beset with almost insuperable obstacles.

Though in many countries a complete break occurs between the lowest gneisses and the overlying Palæozoic sedimentary formations, there are other regions in which these gneisses are intimately associated with schists, limestones, quartzites, and conglomerates. The real character of this association has been variously interpreted, but on any explanation, it shows that such gneisses cannot be older than certain crystalline masses which may be regarded as probably, if not certainly, of sedimentary origin. Hence, while the inference from one series of sections has been that the gneisses belong to an early condition of the cooling crust of the globe, from another series it has been in favor of these gneisses and their associated sedimentary materials having been formed after the crust was solidified, and after mechanical and chemical sediments had begun to be accumulated.

Taking the widest view of the whole series of pre-Palæozoic rocks, with their vast piles of various sedimentary formations above, and their complex series of crystalline massive and schistose rocks below, we encounter a somewhat serious difficulty in the attempt to group the whole of this