

ments in the surrounding parts of the crust, and thereby stimulated crystalline rearrangements, such as have undoubtedly been generated by crushing, plication, and other movements in areas of regional metamorphism.

§ ii. Regional (Normal) Metamorphism—the Crystalline Schists

From the phenomena of metamorphism round a central boss of eruptive rock, we now pass to the consideration of cases where the metamorphism has affected wide areas without visible relation to eruptive matter. It is clear that only those examples are here admissible in evidence where there is distinct proof that what are called metamorphic rocks either pass into masses which have not been metamorphosed, or present characters which are elsewhere proved to have been produced by the alteration either of stratified or of massive rocks.

In the study of this difficult but profoundly interesting geological problem, it is desirable to begin with the examination of rocks in which only the slightest traces of alteration are discernible, and to follow the gradually increasing metamorphism, until we arrive at the most perfectly developed crystalline schists. It is the earliest stages which are of most importance, for it is there that the nature and proofs of the changes can best be established. As already remarked (p. 990), the igneous rocks, from the definiteness of their original structure and composition, offer special facilities for following the nature and extent of the changes involved in the metamorphism of a region or a large series of rocks.

The extent and character of the metamorphism depend in the first place upon the original constitution of the rock,