

conglomerate lying with a complete unconformability upon and made up out of the schists, granites, and pegmatites of the fundamental complex.⁵⁸

India.—In India, the oldest known rocks are gneisses which underlie the most ancient Palæozoic formations, and appear to belong to two periods. The older or Bundelkund gneiss is covered unconformably by certain "transition" or "submetamorphic" rocks, which, as they approach the younger gneiss, become altered and intersected by granitic intrusions. The younger or peninsular gneiss is therefore believed to be a metamorphic series unconformable to the older gneiss. In the western Himalayan chain there are likewise two gneisses—a central gneiss, probably Archæan, and an upper gneiss formed by the metamorphism of older Palæozoic rocks into which it passes, and which lie unconformably on the older gneiss and contain abundant fragments derived from it.⁵⁹

China.—Pre-Cambrian rocks are extensively developed in northern China, forming the fundamental masses round and over which the later rocks have been laid down. According to Richthofen, the oldest portions of the series are mica-gneisses and gneiss-granites with hornblende-schists, mica-schists, etc., having an N.N.W. strike and steep inclination. Apparently of later date are some chlorite-gneisses and hornblende-gneisses with intercalations of mica-gneiss and granulite, but without gneiss-granite, seen in north Tshili and north Shansi, and marked by a persistent W.S.W. and E.N.E. strike. These rocks are succeeded unconformably by a great series of groups which may belong to distinct periods. They consist of mica-schists, crystalline limestones, black quartzites, hornblende-schists, coarse conglomerates and green schists. With some of these groups are associated granite, pegmatite, syenite, and diorite. The whole series underwent great plication and denudation before the deposition of the older Palæozoic formations (Sinisian).⁶⁰

Australasia.—In the South Island of New Zealand the most ancient Palæozoic rocks are underlain by vast masses of

⁵⁸ Amer. Journ. Sci. xliii. 1892, p. 224.

⁵⁹ Medlicott and Blanford, "Manual of Geology of India," pp. xviii. xxvi. But there are younger Indian schistose rocks, from which these must be distinguished. In the Himalayan region there is a series of gneisses and schists below which lie comparatively unaltered beds of supra-Triassic age.

⁶⁰ Richthofen, "China," ii. 1882.