

The south-east of Ireland is very instructive, as on both sides of the rib of granite of the Leinster range there are bands of Paroptesis rocks; but while those to westward of the rib, with some peculiar exceptions hereafter mentioned, retain their Paroptesis form, those in the band to the eastward of the rib have been changed into gneiss and schist by the Metapepsis that subsequently invaded those portions of the counties of Dublin, Wicklow and Wexford. Therefore we have as a general rule to the westward of the granite rib a band of "baked rocks" (due to Paroptesis), while eastward of the rib there is a band of gneiss and schist (due to Paroptesis and subsequent Metapepsis), outside of which are sub-metamorphic rocks. The metapeptic action that invaded the latter area seems to have been most intense in lines running about E.N.E. and W.S.W., so that if we traverse the county from south to north, we cross over zones of "submetamorphic rocks" and of rocks belonging to the "Schist Series;"<sup>1</sup> that is, if we ignore other metamorphic actions now to be mentioned.

In this region, besides the intrusion of the normal Leinster granite (Haughton's type), which is supposed to have taken place in Post Cambro-Silurian time, there were also newer intrusions that may have occurred in Devono-Silurian<sup>2</sup> times; and as the latter were accompanied by Paroptesis, the rocks in connection with them are additionally altered; the "baked rocks" to the westward of the rib being changed into schists, while to the eastward of the rib they have had the metamorphism intensified. There is also to be considered what may have been the effect of the granitic roots (the laccoliths of Gilbert) of the eruptive rocks contemporaneous with the Cambro-Silurians, as these also seem to have had Paroptesis in connection with them, and this necessarily was prior to the Metapepsis of the district. Although the effect of this Paroptesis is not now very conspicuous, yet it should be mentioned, as it shows how many different times the same rocks may be subjected to metamorphic action of some kind or another.

There is also in this area a peculiarity in the metamorphism. Years ago Jukes pointed out that the younger or Cambro-Silurian rocks were more altered than the older Cambrians; and suggested that it might be more apparent than real, as none of the Cambrians in contact with the granite were exposed. But down in the south-east of the Co. Wexford, away from the granite rib, the same thing occurs; as nearly invariably along the boundary between the Cambrians and the Cambro-Silurians the last are more altered than the first.<sup>3</sup> To the north-west and westward of Rathdrum, Co.

<sup>1</sup> *Ibid*, Chapter x. page 175.

<sup>2</sup> In the old world the terms Lower Silurian, Upper Silurian, Devonian and Lower Old Red Sandstone are used so indiscriminately that it is hard to know exactly what rocks are meant. In this paper Selwyn will be followed and to indicate Lower Silurians Phillips's term *Cambro-Silurian* will be used, while all the others will be included under the term *Devono-Silurian*.

<sup>3</sup> In connection with this metamorphism of adjoining rocks, it may be mentioned that in the Belvoir section (Cambro-Silurian), Co. Clare, there are some beds in the fossiliferous strata altered apparently for no particular reason.