

this rearrangement has been effected throughout their whole extent; they have lost their former vertical foliation and have acquired a new one, the surfaces of which are in general parallel with the planes of the thrust movements and with the bedding of the Silurian strata. The Cambrian sandstones and conglomerates have likewise been caught up in the same gigantic displacements, and they too have undergone the most extraordinary transformation into mica-schist and other foliated masses, the quartz pebbles of the conglomerates being drawn out but still recognisable. This remarkable transformation is represented in Figs. 21 and 22, the former showing the ordinary character of the unaltered sandstone, the latter the effects of crushing upon that rock, where it has been converted into a true schist.

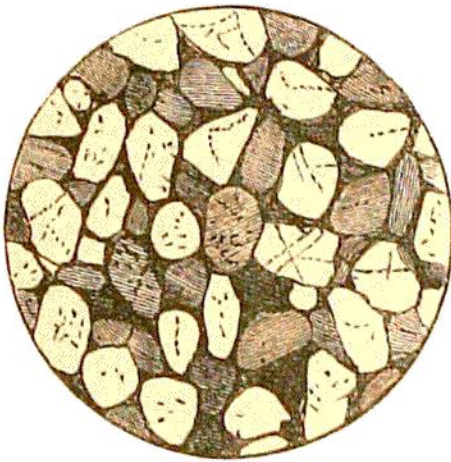


FIG. 21.—Ordinary Unaltered Red Sandstone (Cambrian), Keeshorn, Ross-shire (magnified), showing the irregularly-shaped grains of quartz, felspar, etc.



FIG. 22.—Sheared Red Sandstone forming now a Micaceous Schist, Keeshorn, Ross-shire. The pebbles are crushed and elongated, and the felspar materials have been partly converted into mica.

The quartzites also, where they have been subjected to movement of the same kind, have assumed a similar foliated structure. In short, the effect of the internal crushing and rearrangement of the rocks under the enormous pressures to which they were subjected during the process of up-thrust has been to superinduce upon them all a general