

intermittent deposit, each lamina being assumed to have partially consolidated before its successor was laid down upon it. Mr. Sorby, however, has recently suggested that in fine argillaceous rocks it may be a kind of cleavage-structure (see p. 534), due to the pressure of the overlying rocks, with the consequent squeezing out of interstitial water and the rearrangement of the argillaceous particles in lines perpendicular to the pressure.²

Much may be learned as to former geographical and geological changes by attending to the characters of strata.

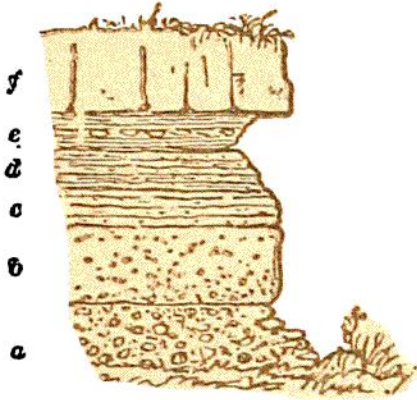


Fig. 191.—Section of Stratified Rocks.

a, conglomerate; *b*, thick-bedded pebbly sandstone; *c*, thin-bedded sandstone; *d*, shelly sandstone; *e*, shale with ironstone nodules; *f*, limestone with marine organisms.

In Fig. 191, for example, there is evidence of a gradual diminution of movement in the waters in which the layers of sediment were deposited. The conglomerate (*a*) points to currents of some force; the sandstones (*b c d*) mark a progressive quiescence and the advent of finer sediment; the shales (*e*) show a deposition of fine mud and accretion of ferrous carbonate into nodules round organic remains; while the

shell-limestone (*f*) proves that the water no longer carried much sediment, but had become clear enough for an abundant growth of marine organisms. The existence, therefore, of alternations of fine laminae of deposit may be conceived as pointing to tranquil conditions of slow intermittent sedimentation, where silt has been borne at intervals and has fallen over the same area of undisturbed water. Regularity of thickness and persistence of lithological char-

² Quart. Journ. Geol. Soc. xxxvi. p. 67, 1880.