

large measure connected with such physical changes as are indicated by diversities of sedimentary materials and arrangements. The Upper Silurian stages, for example, as studied by Murchison in Shropshire and the adjacent counties, present a clear sequence of strata well defined by characteristic fossils. But within a distance of sixty miles, it becomes impossible to establish these subdivisions by fossil evidence. Again, in Bohemia and in Russia we meet with still greater departures from the order of appearance in the original Silurian area, some of the most characteristic Upper Silurian organisms being there found beneath strata replete with records of Lower Silurian life. Nevertheless, the general succession of life from Lower to Upper Silurian types remains distinctly traceable. Still more startling are the anomalies, already referred to, where the succession of terrestrial organisms in distant regions is compared with that of the associated marine forms; as where, in Australia, a flora with Jurassic affinities and a Carboniferous Limestone fauna were contemporaneous. Such facts warn us against the danger of being led astray by an artificial precision of palæontological detail. Even where the palæontological sequence is best established, it rests, probably in most cases, not merely upon the actual chronological succession of organic forms, but also, far more than is usually imagined, upon original accidental differences of local physical conditions. As these conditions have constantly varied from region to region, it must comparatively seldom happen that the same minute palæontological subdivisions, so important and instructive in themselves, can be identified and paralleled, except over comparatively limited geographical areas. The remarkable "zones" of the Lias, for instance, which have been recognized over central and western Europe, cease to