

the specific standing of these Belemnites still remains to be determined: it is possible they may not be Secondary forms; and it has been suggested by M. Michelin, a distinguished French geologist, that generically the Belemnite may not be of the premised importance in reference to the age of these Tarentaise beds. 'He is inclined,' we find him saying, 'to consider it an instance of the occurrence of the Belemnite form in the Carboniferous period, rather than of the continuance of the same *species* of plants through several successive epochs.'

But, leaving it to the future researches of geologists to determine whether there be any, and, if so, how many, organisms common to the Secondary and Palæozoic divisions, a very slight acquaintance with fossils is sufficient to show that between the types of organic nature in these two great divisions there exist differences and distinctions of the broadest and most palpable kind. In passing upwards from the Triassic to the Permian, we seem to pass, not merely from one dynasty to another, but, if I may dare employ such a term, from one dispensation to another. So broad are the differences, that they affect whole classes of the animal kingdom. In the class of fishes, for instance, an entire change takes place in the form of the tail. There are a few ichthyic families in the present day, such as the sharks and sturgeons, that have unequally-lobed tails, from the circumstance that a prolongation of the vertebral column runs into the upperlobe; whereas in perhaps nineteen-twentieths of all the existing families, the vertebral column stops short, as in the osseous fishes common at our tables, a little over the lobes, to form for them a medial basis, and the lobes themselves are equal. And this equal-lobed, or, as it is termed, *homocercal* condition, is the prevailing one, not only in the present time, but in all the Tertiary and in all the Secondary ages, up till the close of the Triassic system. And then, sudden as the shifting of a scene, or as one of the abrupt transitions of a dream,