

zoophagous mollusca discharged the functions afterwards performed by an inferior order in the secondary, tertiary, and post-tertiary seas. But I have never seen this view suggested as adverse to the doctrine of progress, although much stress has been laid on the fact, that the Silurian brachiopoda, creatures of a lower grade, formerly discharged the functions of the existing lamellibranchiate bivalves, which are higher in the scale.

It is said truly that the ammonite, orthoceras, and nautilus of these ancient rocks were of the tetrabranchiate division, and none of them so highly organised as the belemnite and other dibranchiate cephalopods which afterwards appeared, and some of which now flourish in our seas. Therefore, we may infer that the simplest forms of the cephalopoda took precedence of the more complex in time. But if we embrace this view, we must not forget that there are living cephalopoda, such as the octopods, which are devoid of any hard parts, whether external or internal, and which could leave behind them no fossil memorials of their existence; so that we must make a somewhat arbitrary assumption, namely, that at a remote era, no such dibranchiata were in being, in order to avail ourselves of this argument in favour of progression. On the other hand, it is true that in the 'primordial zone' of Barrande not even the shell-bearing tetrabranchiates have yet been discovered.

In regard to plants, although the generalisation, above cited, of M. Adolphe Brongniart (p. 398) is probably true, there has been a tendency in the advocates of progression to push the inferences deducible from known facts, in support of their favourite dogma, somewhat beyond the limits which the evidence justifies. Dr. Hooker observes, in his recent introductory essay on the flora of Australia, that it is impossible to establish a parallel between the successive appearances of vegetable forms in time, and their complexity of structure or specialisation of organs as represented by the successively